United States Department of the Interior
Bureau of Land Management

Environmental Assessment CA-670-2008-77
Casefile Number: CACA-45248

Finding of No Significant Impact and Decision Record

Pacific Wind Development, LLC
Tule Wind Meteorological Tower Installation Project

U.S. Department of the Interior
Bureau of Land Management
El Centro Field Office
1661 South 4th Street
El Centro, CA 92243

March 2010

Finding of No Significant Impact
El Centro Field Office

EA Number: CA-670-2008-77
Case File No. CACA-45248

Proposed Action Title/Type: Proposed Right-of-Way Grant for Wind Energy Site Testing and Monitoring Project Area

Applicant/Proponent: Pacific Wind Development, LLC
1125 NW Couch Street, Suite 700
Portland, OR 97209

Location of Proposed Action:

San Bernardino Meridian, Township 16 South, Range 6 East
Section 2, NW1/4 (lat/long: 32° 48‘ 45.4″ N, 116° 20‘ 23.3” W (WGS-84))
Section 17, SW1/4 (lat/long: 32° 46‘ 21.7″ N, 116° 17‘ 17.6” W (WGS-84))

San Bernardino Meridian, Township 17 South, Range 7 East
Section 5, NE1/4 (lat/long: 32° 43‘ 31.1″ N, 116° 16‘ 39.6” W (WGS-84))

INTRODUCTION

The need to increase and diversify energy sources has become a top priority within California and the nation. Wind energy diversifies the nation’s energy supply, uses a domestic, renewable resource, and produces almost no pollution by-products. The Department of Energy (DOE) has set a target goal for 20 percent of the nation’s electric energy to be produced by wind by 2030 (DOE 2009). In 2001, President Bush issued Executive Order 13212, Actions to Expedite Energy-Related Projects which includes an emphasis on renewable energy development. More recently, on February 17, 2009, President Obama signed the American Recovery and Reinvestment Act (2009) which includes specific provisions supporting alternative energy development under Sections 45 and 46.

Pacific Wind Development, LLC, a wholly owned subsidiary of Iberdrola Renewables, Inc. (IBR) holds a Type 2 Right-of-Way (ROW) for testing and monitoring wind energy, located on public lands administered by the Bureau of Land Management (BLM) El Centro Field Office in eastern San Diego County, California. The BLM issued the Type 2 ROW on January 1, 2004 (CACA-45248). In September 2004, two meteorological (MET) stations were approved for placement within the ROW. The two MET stations are located along McCain Valley Road and are still in operation; each occupying a surface area of approximately 9 square feet (sq ft). On January 1, 2008, IBR applied for an amendment to the existing ROW to install and operate three additional MET towers and one Sodar unit within the same ROW area in an effort to collect

more refined meteorological data (referred to as Proposed Project-Alternative 1 in EA CA-670-2008-77). BLM is responsible for responding to Type 2 ROW applications for analysis and testing of wind patterns on public lands (43 CFR Sections 2804 and 2807).

Three additional MET towers and one Sodar unit (at Location Two) are proposed to be installed at three different MET monitoring station locations within the IBR ROW.

- Location One: San Bernardino Meridian, Township 16 South, Range 6 East, section 2, NW1/4 (lat/long: 32° 48‘ 45.4″N, 116° 20‘ 23.3″ W (WGS-84)).
- Location Two: San Bernardino Meridian, Township 16 South, Range 6 East, section 17, SW1/4 (lat/long: 32° 46‘ 21.7″N, 116° 17‘ 17.6″ W (WGS-84)).
- Location Three: San Bernardino Meridian, Township 17 South, Range 7 East, section 5, NE1/4 (lat/long: 32° 43‘ 31.1″N, 116° 16‘ 39.6″ W (WGS-84)).

All three proposed MET monitoring station locations are within approximately 1 mile of McCain Valley Road. These three MET monitoring station locations were chosen because these sites are located at points in existing topography where wind is unobstructed and the devices may record the best environmental data. The presence of existing routes was also taken into consideration in the location selection process.

Several alternate locations for the three MET device sites were considered and dismissed because these locations where not located at points in existing topography where wind is unobstructed. Therefore, alternate MET monitoring station locations were eliminated as a viable alternative.

Alternative 1 – Proposed Project

IBR proposes to install three additional MET monitoring towers and one Sodar unit at three different locations within their ROW. The surface installation acreage required for a MET tower and guy wired anchors is approximately 0.001 acres. The surface installation acreage required for a Sodar unit is approximately 0.001 acres. Total surface installation acreage required for both a MET tower and Sodar unit is approximately 0.002 acres.

Construction of each MET tower is expected to take up to two days and involve two to three people, two trucks, and one ancillary vehicle. Construction of the MET tower does not require the use of heavy equipment or machinery. Each MET tower and associated equipment would be assembled on the ground at the site. The MET tower is considered a temporary structure and minimal or no surface grading, or vegetation clearing is required to install or uninstall this device. The MET tower is expected to be in place for a minimum of one year, with a possibility of up to three years depending on the quantity and quality of data collected by the device. Dismantling of the towers would involve the same process and would take approximately two days to complete. Site visits for MET tower inspection and maintenance would occur as needed.

The Sodar unit is expected to be in place for a minimum of one year, with a possibility of up to three years depending on the quantity and quality of data collected by the device. The Sodar unit would be placed at Location Two within 100-328ft of the MET tower base. There may be an

occasional need during the one to three year operation period for workers to visit the Sodar unit to address issues with the device.

Access to each MET monitoring station would be accomplished through vehicular travel using the best available established roads and trails while avoiding ground disturbance and established vegetation wherever possible. Road improvements are not anticipated to occur on any of the roads/trails in the project boundary. Due to the lack of BLM routes of travel at all locations, vehicle travel overland and off of BLM routes of travel for short distances would occur.

- The total distance of the proposed access route from McCain Valley Road to the MET monitoring station Location One is approximately 688 ft; however, 400 ft of that is the BLM "non-motorized" trail. The overland portion to Location One is approximately 288 ft.
- The overland access route from McCain Valley Road to the MET monitoring station Location Two is approximately 793 ft in length and follows what appears to be an existing illegal off-highway vehicle (OHV) trail. The overland portion of the distance to Location Two is approximately 793 ft.
- The approximate distance of this proposed access route on existing roads/trails to Location Three is 6,320 ft. The overland portion of the distance to Location Three is approximately 97 ft.

In the locations where vehicle travel off of BLM official routes are proposed, a 30 ft wide overland access route will be utilized to ensure that all vehicles stay within the biological and culturally surveyed areas. Dense vegetation and rock outcrops would be avoided; however, it is anticipated that minor impacts such as crushed vegetation and soil disturbance would occur during the off-route transport. The same overland route used to access the monitoring stations would be used for egress. No shrub vegetation would be cleared/bladed using machinery; however minimal shrub vegetation would be impacted during overland travel to install and later remove equipment. All vehicle tracks would be raked out after installation and later removal of the MET equipment. This would allow minimal attention to be drawn to the overland route and lower the possibility of creating an illegal trail. Any vegetation that was affected by the vehicles and trailer towing would then be used to cover the trail.

<u>Alternative 2 – Overland On-Foot Access Only</u>
Under this alternative, the short distance, overland access routes for the MET towers (Locations One and Three) would be accomplished on-foot where McCain Valley Road or the BLM routes of travel end. The vehicles transporting the MET tower's associated equipment would use McCain Valley Road and other BLM routes of travel and when near the MET monitoring station locations, the vehicles would park alongside the route in the nearest location to the proposed MET station. Foot crews would then carry the MET tower associated equipment through the vegetation to the MET monitoring station location. Crews would use the path of least resistance and walk through existing sparse vegetation and flat topography. Minor disturbance to vegetation is expected with this installation process for the MET tower. The overland on-foot procedure applies only to MET station Locations One and Three. Under this alternative, the construction of the MET monitoring tower and Sodar unit at Location Two would allow overland vehicle access as outlined in the Proposed Project for Location Two as the placement of the Sodar Unit requires the use of a vehicle and trailer.

Alternative 3 – No Action Alternative
Under the No-Action alternative, Pacific Wind would not install three MET devices. As a result, no additional data on wind patterns in the area would be available to assess the area's potential to provide wind-generated electricity.

PLAN CONFORMANCE AND CONSISTENCY

All three proposed MET station locations would occur within the McCain Valley portion of the Eastern San Diego Resource Management Planning Area. This area is managed to provide for a variety of uses including renewable energy, wildlife conservation and recreation. Recreational activity in the area includes camping, hunting, hiking, horseback riding, backpacking, mountain biking, wildlife viewing, photography, and OHV use. The area encompasses 38,692 acres of the In-Ko-Pah Mountains. Installation of the MET towers and Sodar unit is consistent with the allowable uses within this area under the Eastern San Diego Resource Management Plan.

FINDING OF NO SIGNIFICANT IMPACT

The El Centro Field Office interdisciplinary review and analysis determined that Alternative 2 would not trigger significant impacts on the environment based on criteria established by regulations, policy and analysis.

Based on the analysis in EA CA-670-2008-77, and the findings discussed herein, I conclude that the Alternative 2 is not a major federal action and would not significantly affect the quality of the human environment, individually or cumulatively with other actions in the general area. No environmental effects meet the definition of significance in context or intensity as defined in 40 C.F.R. § 1508.27 and the effects do not exceed those thresholds described in the Eastern San Diego Resource Management Plan. Therefore, preparation of an environmental impact statement to further analyze possible impacts is not required pursuant to Section 102(2)(c) of the National Environmental Policy Act of 1969.

This determination is based on the rationale that the significance criteria, as defined by the Council on Environmental Quality (CEQ) (40 C.F.R. § 508.27) have not been met.

The following rationale was used to determine that significant impacts were not present for each criteria mentioned in Title 40 C.F.R. § 1508.27:

Context:
This means that the significance of an action must be analyzed in several contexts such as society as a whole (human, national), the affected region, the affected interests, and the locality. Significance varies with the setting of the proposed project. For instance, in the case of a site-specific action, significance would usually depend upon the effect in the locale rather than in the world as a whole. Both short and long term effects are relevant.

The context of the EA CA-670-2008-77 analysis was determined to be at a local and regional scale in San Diego County, California. The effects of the action are not applicable on a national scale since no nationally significant values were involved.

Intensity:
This refers to the severity of impact. The following discussion is organized around the Ten Significance Criteria described in 40 CFR § 1508.27 and incorporated into BLM's Critical Elements of the Human Environment list (H-1790-1), and supplemental Instruction Memorandum, Acts, regulations and Executive orders. In making this Finding of No Significant Impact (FONSI), the following criteria have been considered, in accordance with CEQ regulations, 40 CFR §1508.27:

1. The activities described in the proposed action do not include any significant beneficial or adverse impacts (40 C.F.R. § 1508.27(b)(1)).

The proposed MET devices would have no effect on the following resources or conditions because they are not present within the project area: prime or unique farmland, wild and scenic rivers, hazardous or solid wastes, floodplains, wetlands or riparian zones, ground or surface water quality, energy, and environmental justice. Uses present but unaffected by Alternative 2 include: areas of critical environmental concern, wildlife management areas, and air quality.

Under Alternative 2, the three METs and one Sodar unit would be installed using pedestrian access at Locations One and Three, and using motor vehicles at Location Two. This would result in 785 ft (239.2 m and .148 miles) less vehicle ground disturbance, resulting in less potential disturbance in the wildlife management area, less vehicle ground disturbance along access routes (reducing the possibility of creating new unapproved routes of travel), and less fugitive dust and reactive organic gases associated with vehicle emissions. Provided the Visual Resource Protection Measures outlined in Section 2.2.4.3 of EA CA-670-2008-77are adhered to, the project would not be adverse to visual resources.

2. The activities included in the proposal action would not significantly affect public health or safety (40 C.F.R. § 1508.27(b)(2)).

Implementation of Alternative 2 would not result in potentially substantial or adverse effects to public health and safety. Safety measures would be used to ensure no adverse effects to human safety. These measures include: the top portion of the tower would have a red and white treatment to improve visibility. The guy wires supporting each tower would also be fitted with a brightly colored ball, 12 inches (30.5 cm) in diameter near the top of each guy wire. Finally, a brightly colored guy wire sleeve would cover the base of each guy wire to create visibility for recreational users.

3. The proposed activities would not significantly affect any unique characteristics (40 C.F.R. § 1508.27(b)(3)) of the geographic area such as prime and unique farmlands, caves, wild and scenic rivers, designated wilderness areas, wilderness study areas, or areas of critical concern.

Alternative 2 would not take place in any designated or proposed prime or unique farmlands, Wild and Scenic Rivers, designated or proposed wilderness areas or areas meeting the criteria of the National Wilderness Preservation Act of 1964, or caves. The project area is surrounded by the BLM In-Ko-Pah Area of Critical Environmental Concern (ACEC). Alternative 2 would not take place within the In-Ko-Pah ACEC or any other designated or proposed ACEC's.

4. The activities described in the proposed action do not involve effects on the human environment that are likely to be highly controversial (40 C.F.R. § 1508.27(b)(4)).

The effects of installing MET devices are not likely to be highly controversial. There would be no anticipated effects on human health. The nearest established residential community is at least 2 miles from the project, and there are two existing MET towers nearby that are already accepted by the local community.

5. The activities described in the proposed action do not involve effects that are highly uncertain or involve unique or unknown risks (40 C.F.R. § 1508.27(b)(5)).

The effects of Alternative 2 identified in EA CA-670-2008-77 are not uncertain and do not involve unique or unknown risks. As described in EA CA-670-2008-77, the project area already supports two temporary MET towers.

6. My decision to implement these activities does not establish a precedent for future actions with significant effects or represent a decision in principle about a future consideration (40 C.F.R. § 1508.27(b)(6)).

The Tule Wind Meteorological Tower Installation Project represents a site-specific project that does not set precedence for future actions or present a decision in principle about future considerations. Any future project would be evaluated individually on its own merits.

7. The effects of the Tule Wind Meteorological Tower Installation Project would not be significant, individually or cumulatively, when considered with the effects of other actions (40 C.F.R. § 1508.27(b)(7)).

An analysis of cumulative effects was conducted in the EA CA-670-2008-77 and no significant cumulative effects were identified. The project would have no effect on the following resources or conditions because they are not present within the project area; prime or unique farmlands, wild and scenic rivers, hazardous or solid wastes, floodplains, wetlands or riparian zones, ground or surface water quality, energy, and environmental justice. Uses present but unaffected by Alternative 2 include: ACEC, wildlife management areas, and air quality.

8. I have determined that the activities described in the proposed project will not adversely affect or cause loss or destruction of scientific, cultural, or historical resources, including those listed in or eligible for listing in the National Register of Historic Place (40 C.F.R. § 1508.27(b)(8).

A literature and records search and Class III cultural resources inventory for the entire Area of Potential Effect (APE), plus a buffer, was conducted for the proposed project. Under Alternative 2, the three METs and one Sodar unit would be installed using pedestrian access at Locations One and Three, and using motor vehicles at Location Two. This would result in less ground disturbance along access routes. Provided that the standard resource protection measures outlined in the Section 2.2.6.6 of EA CA-670-2008-77 are adhered to, the implementation of the MET/Sodar testing phase of Tule Wind Project would have no adverse effect on cultural

resources listed on or eligible for nomination to the National Register of Historic Places. The project would not adversely affect districts, sites, highways, structures, or other objects listed in or eligible for listing in the national Register of Historic Places, nor would it cause loss or destruction of significant scientific, cultural, or historical resources.

The Native American Heritage Commission (NAHC) performed a sacred lands records search of the project area, which failed to identify the presence of sacred sites or known traditional cultural properties that could be affected by the proposed undertaking. The search did identify cultural resources within the immediate IBR ROW project area. The letter included a list of Native American individuals and organizations that may have knowledge of resources in the area. The BLM sent letters to eight Tribal governments and other individuals and tribal staff as part of the government to government consultation for the proposed project. The letters notified the tribes of the proposed project, requested information regarding knowledge of potential cultural resources in the area, and solicited comments regarding the proposed project. Keith Adkins, Environmental Manager for the Manzanita Band of Kumeyaay Indians, indicated in a February, 2010 phone call that the Manzanita are concerned about the cultural resources of McCain Valley, and would like to have monitors on site during the installation of the MET towers, consistent with Section 2.3 of the Decision Record for this project.

9. The proposed activities are not likely to adversely affect any endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act (40 C.F.R. § 1508.27(b)(9)).

No special status plant species colonies are known to occur at the proposed MET monitoring station location sites or within the proposed access routes. In all instances, MET device installation and removal activities would avoid ground disturbance and established vegetation wherever possible. The overland-on-foot access option, Alternative 2, would require met towers to be delivered to the site on foot reducing the amount of temporary vegetation disturbance.

EA CA-670-2008-77 identified 28 (federal, state and local) listed and sensitive wildlife species as having the potential to occur within the project area. Implementation of Alternative 2 would result in no impact to the quino checkerspot butterfly, arroyo toad, barefoot banded gecko, southwestern willow flycatcher or least Bell‘s vireo, golden eagle, burrowing owl, grey vireo, or Peninsular bighorn sheep. Implementation of Alternative 2 would have little or no impact to the coast (San Diego) horned lizard.

10. The proposed activities will not threaten any violation of federal, state, or local law or requirements imposed for the protection of the environment (40 C.F.R. § 1508.27(b)(10)).

The proposed project does not violate or threaten to violate any federal, state or local laws or requirements imposed for the protection of the environment. State, local and tribal interests were given the opportunity to comment on the environmental analysis project. Letters were sent to numerous tribal representatives who could have cultural ties to the project area. The project is consistent with applicable land use plans.

Reviewed by: /s/ Linda Hughes Date: 3/18/2010
Acting NEPA and Planning Coordinator

Authorized Officer: /s/ Daniel Steward Date: 3/18/2010
Acting Field Manager
El Centro Field Office

Decision Record
El Centro Field Office

EA Number: CA-670-2008-77
Case File No. CACA-45248

Proposed Action Title/Type: Proposed Right-of-Way Grant for Wind Energy Site Testing and Monitoring Project Area

Applicant/Proponent: Pacific Wind Development, LLC
1125 NW Couch Street, Suite 700
Portland, OR 97209

Location of Proposed Action:

San Bernardino Meridian, Township 16 South, Range 6 East
Section 2, NW1/4 (lat/long: 32° 48‘ 45.4″ N, 116° 20‘ 23.3” W (WGS-84))
Section 17, SW1/4 (lat/long: 32° 46‘ 21.7″ N, 116° 17‘ 17.6” W (WGS-84))

San Bernardino Meridian, Township 17 South, Range 7 East
Section 5, NE1/4 (lat/long: 32° 43‘ 31.1″ N, 116° 16‘ 39.6” W (WGS-84))

1.0 Introduction and Background

Pacific Wind Development, LLC, a wholly owned subsidiary of Iberdrola Renewables, Inc. (IBR) holds a Type 2 Right-of-Way (ROW) for testing and monitoring wind energy, located on public lands administered by the Bureau of Land Management (BLM) El Centro Field Office in eastern San Diego County, California. The BLM issued the Type 2 ROW on January 1, 2004 (CACA-45248). In September 2004, an Environmental Assessment (EA) was prepared and approved for two meteorological (MET) stations within the ROW. The two MET stations are located along McCain Valley Road and are still in operation; each occupying a surface area of approximately 9 sq ft. On January 1, 2008, IBR applied for an amendment to the existing ROW to install and operate three additional MET towers and one Sodar unit within the same ROW area in an effort to collect more refined meteorological data. BLM is responsible for responding to Type 2 ROW applications for analysis and testing of wind patterns on public lands (43 CFR Sections 2804 and 2807). The MET devices are designed to collect data on wind patterns, and these data will be used to determine whether the immediate area is suitable for the installation of a wind-power generating facility.

An EA was prepared to disclose and analyze the environmental consequences of the installation of three MET towers and one Sodar unit. Only the installation of three MET towers and associated guy wire supports, a Sodar unit, and access needs are addressed in the EA. The EA did not address wind energy development facilities. Any future project would be evaluated individually on its own merits.

2.0 Decision

2.1 Alternatives Considered

Several alternate locations for the three MET device sites were considered and dismissed because they were not at topographic sites where wind is unobstructed. Therefore, alternate MET monitoring station locations were eliminated as a viable alternative. Alternatives assessed in EA CA-670-2008-77 included the proposed project (Alternative 1), overland on-foot access only (Alternative 2), and the no-action alternative (Alternative 3).

2.2 Decision and Rationale

Based on information in the EA, the project record, and consultation with my staff, it is my decision to approve the proposed project under Alternative 2 and issue a temporary right-of-way for the construction, operation, maintenance, and termination of three MET towers and one Sodar unit as described in EA CA-670-2008-77 subject to the stipulations identified below.

The authority for this decision is Title V of the Federal Land Policy and Management Act of 1976 (P.L. 94-579), which authorizes the BLM to grant, issue, or renew rights-of-way over, upon, under, or through public lands (43 U.S.C. § 1761). General regulations for processing ROWs are found at 43 C.F.R. § 2800.

The proposed project is consistent with the President's National Energy Policy and with BLM's National Energy Policy Implementation Plan. It is BLM's general policy to encourage research into the development of wind energy in acceptable areas.

In 2005 BLM implemented a comprehensive Wind Energy Development Program to administer the development of wind energy resources on BLM-administered public lands. This document established policies and best management practices to ensure that potential adverse impacts associated with all stages of wind energy development on BLM-administered land are minimized to the greatest extent possible. The Wind Energy Development Program supports the directives of Executive Order 13212, "Actions to Expedite Energy-Related Projects," the recommendations of the National Energy Policy, and congressional direction provided in the Energy Policy Act of 2005 regarding renewable energy development on public lands.

Alternative 2 was selected over the proposed project and no action alternative for the following reasons:

- Alternative 2 most closely conforms to the President's Energy Policy of 2005 and BLM's National Energy Policy Implementation Plan. It is BLM's general policy to encourage research into the development of wind energy in acceptable areas.
- With the mitigation measures and stipulations listed below, the adverse environmental impacts of the Alternative 2 are not significant and will be only nominally greater than those attributable to the No Action Alternative.

The granting of this ROW is consistent with the goals set forth in the President's Energy Policy of 2005. Alternative 2 is not expected to adversely impact any resources.

2.3 Description of Mitigation Measures

As part of the decision the BLM will impose the following stipulations under Alternative 2:

1. Upon completion of the data collection efforts, the MET devices and all recoverable components will be removed from each of the three monitoring stations locations. Any components deemed to be unrecoverable will be disposed of in approved landfills.
2. So as not to create an illegal trail, no shrub vegetation will be cleared/bladed using machinery; however, minimal shrub vegetation will be impacted during overland travel to install and later remove the Sodar unit;
3. If an overland two-track-trail is created to install/uninstall the MET towers and Sodar unit, the contractor will rake out their tracks so as not to draw attention to the route and create an illegal trail. They will also try to cover and hide the route with any vegetation that was affected by the vehicle and trailer towing the Sodar unit;
4. Construction and operation of the MET towers will also incorporate safety features such as 5 foot long protective wire covers around the guy wires which will be reflective to ensure that if collisions occur between recreationists and the wires there will be less chance of severe injuries occurring and to create visibility for recreational users;
5. Due to the colorful safety features required for the MET towers, no concealing treatments can be employed for these devices. However, vegetation and topography may shield the Sodar unit and minimize impacts to visual resources;
6. Contractors will follow the prescribed route to enter and leave the project location;
7. The contractors will define and respect work area limits;
8. To the extent practical, the contractors will preserve existing vegetation. All work performed as the result of project activities will try to avoid all trees and vegetation within the project area;
9. Precautions will be taken to avoid damage to vegetation by people or equipment;
10. To prevent the introduction of new invasive weedy plant species into the project area, IBR will require the designated contractor to ensure that vehicles and equipment that have been used on sites outside of the project area have been cleaned prior to starting work on the project;
11. Highly visible balls, flagging or other comparable and effective marking device will be placed on the guy wires to avoid or reduce avian collisions;
12. Prior to project implementation, a qualified biologist will conduct educational and awareness training about the biological resources present at the project locations and within the project area.
13. While flagging the overland route to the proposed MET station location, a qualified biologist will conduct pre-installation survey. This will help to determine if there are sensitive biological resources present that may be harmed by project implementation.
14. The contractors will not disturb, capture, handle, or move animals, or their nests/burrows;
15. If any wildlife is encountered during the course of project activities, said wildlife will be allowed to freely leave the area unharmed;

16. To avoid impacts to wildlife, the contractor will institute a litter control program during the course of the construction activities. Litter will not be left on the project site. Litter will be properly disposed of at that end of the day;
17. Pets will be prohibited on the job site;
18. Contractors will be prohibited from collecting plants and wildlife;
19. BLM will require a BLM approved biological monitor on site during ground disturbing activities;
20. All work regarding the installation and removal of the MET and Sodar units will be monitored by a qualified archaeologist. This includes any reclamation of overland access routes;
21. Prior to project implementation, all non-archaeological project personnel will be briefed by a trained archaeologist on the importance of, and the legal basis for, the protection of significant archaeological resources. Personnel will be given a training brochure regarding identification of cultural resources and reporting finds;
22. If the construction staff or others observe previously unidentified archaeological resources during construction, they should halt work in the vicinity of the find(s) and immediately notify the project archaeologist and BLM El Centro Field Office Archaeologist, so that the resource value may be documented and assessed as soon as possible. The finds will be formally recorded and evaluated. The proponent should protect the cultural resource discovery from further disturbance pending evaluation;
23. If human remains and/or cultural items defined by the Native American Graves Protection and Repatriation Act (NAGPRA) are inadvertently discovered during construction activities, all work in the vicinity of the find will cease and the San Diego County Coroner and the BLM El Centro Field Office Archaeologist will be contacted immediately pursuant to Section (3)(d)(1) of the Act. If the remains are found to be Native American as defined by NAGPRA, work may be delayed in the vicinity of the find up to 30 days;
24. All contractors will follow only the prescribed route to enter and leave the project location;
25. The contractors will define and respect clear work area limits;
26. The contractors will not disturb, handle, move or collect cultural resources; and
27. A BLM approved Native American Consultant will be on site during ground disturbing activities, as requested by Keith Adkins, Environmental Manager for the Manzanita Band of Kumeyaay Indians, in a February 2010 phone call.

3.0 Public Participation/Consultation/Coordination

3.1 Biological Resources

Research was performed via existing database information on biological resources within the project vicinity including the California Department of Fish and Game's California Natural Diversity Database (CNDDB), USFWS, and BLM databases, as well as Natureserve.org (Natureserve), California Native Plant Society (CNPS, 2001), Jepson Manual (Hickman, 1993), San Diego Natural History Museum (SDNHM, 2004), and various other project related studies (BLM, 2008; CDFG, 2008b USFWS 2008a, 2008b; IBR 2009).

In 2005, 2006, and 2008, biological consultants surveyed portions of McCain valley for quino checkerspot butterfly. A third-party consultant conducted avian surveys between September 2007 and September 2008 within the proposed project ROW. Bat studies recording data at the two current MET tower locations were conducted between September 2008 and September 2009.

A third-party consultant conducted a reconnaissance-level, habitat assessment of the three installation locations in April 2009.

Based on the desktop study and reconnaissance survey results, the installation of MET devices in this action is not expected to create adverse impacts to habitat for any special-status species or sensitive native vegetation potentially occurring within the project area. In addition, no individual sensitive plant populations will be affected by Alternative 2. Likewise, no nesting sites for sensitive avian and/or bat species were observed during a biological reconnaissance survey of the MET tower locations. Some individual species-of-special-concern (or BLM Sensitive Species) may be temporarily displaced by Alternative 2, but this impact is not considered to be adverse due to the very small disturbance area associated with the MET device installation and the temporary nature of the action.

3.2 Cultural Resources

The 2004 State Protocol Agreement between the California State Director of the BLM and the California State Historic Preservation Officer (SHPO) defines the roles and relationships between the SHPO's offices and the BLM and provides BLM with an alternative procedure for meeting its responsibilities under the National Historic Preservation Act (NHPA) Section 106. The state protocol is intended to insure that the BLM operates efficiently and effectively in accordance with the intent and requirements of the NHPA. The protocol streamlines the NHPA Section 106 process by not requiring case-by-case consultation with the SHPO on most individual undertakings.

A literature and records search of the cultural resources site and project file collection was conducted at the South Coastal Information Center of the California Historical Resources Information System, at San Diego State University, San Diego, California.

A qualified archeologist conducted a Class III cultural resources inventory of the proposed MET locations during April 29-30, 2008. While one prehistoric archaeological site was identified in the area, this site does not appear to be eligible for listing to the National Register and in any case will be avoided. No other historic properties were identified.

The Native American Heritage Commission (NAHC) was contacted requesting a Sacred Lands file search and local tribal contact list on June 20, 2008. The NAHC responded by a faxed letter on July 3, 2008, indicating that a search of the Sacred Lands file, "failed to indicate the presence of Native American cultural resources in the Proposed Project area." The letter included a list of Native American individuals and organizations that may have knowledge of resources in the area. The BLMS sent letters to these individuals and organizations on December 19, 2009 as part of the government to government consultation for the project. See Table 3 in EA CA-670-2008-77 for a list of tribal representatives contacted.

4.0 Plan Consistency and Other Applicable Regulatory Requirements

All three proposed MET station locations occur within the McCain Valley portion of the Eastern San Diego Resource Management Planning Area. This area is managed to provide for a variety of uses including renewable energy, wildlife conservation and recreation. Recreational activity in the area includes camping, hunting, hiking, horseback riding, backpacking, mountain biking, wildlife viewing, photography, and OHV use. The area encompasses 38,692 acres of the In-Ko-Pah Mountains. Installation of MET towers and Sodar unit is consistent with the allowable uses within this area under the Eastern San Diego Resource Management Plan.

All three proposed MET device installations and one Sodar unit will occur within the McCain Valley National Cooperative Land and Wildlife Management Area. Established in 1963, the McCain Valley Resource Conservation Area is managed to provide for a variety of uses including wildlife conservation, livestock grazing, and recreation. In addition, USFWS Critical Habitat for Peninsular Bighorn Sheep occurs outside of the IBR ROW, directly to the east. Installation of MET devices is expected to remain consistent with all allowable management uses within this area.

The project area lies within a Class 4 BLM Visual Resource Management (VRM) area. Class 4 designation means to provide for management activities that require major modification of the existing character of the landscape. The level of change to the characteristic landscape can be high. These management activities may dominate the view and be the major focus of viewer attention. However, every attempt should be made to minimize the impact of these activities through careful location, minimal disturbance and repeating the basic landscape elements. Due to the colorful safety features required for the MET towers, no concealing treatments can be employed for these devices. However, a camouflage paint treatment and micro-siting among concealing vegetation and topography may be applied to the Sodar unit to minimize impacts to visual resources.

Based on the information in EA CA-670-2008-77, I conclude that this decision is consistent with the BLM VRM guidelines, the Endangered Species Act; cultural resource management laws and regulations; Executive Order 12898 (Environmental Justice); and Executive Orders 13211 and 13212 regarding the direct or indirect adverse impact on energy development, production, supply, and/or distribution.

5.0 Administrative Remedies

Administrative remedies may be available to those who believe they will be adversely affected by this decision. When BLM issues a decision on a right-of-way application, it may be appealed by any party adversely affected by the decision (43 C.F.R. § 4.410(a)).

This decision may be appealed to the Interior Board of Land Appeals (IBLA), Office of the Secretary, in accordance with the regulations contained in 43 CFR, Part 4, and the enclosed Form 1842-1. If an appeal is taken, your notice of appeal must be filed within 30 days from this decision. The appellant has the burden of showing that the decision appealed from is in error. If a

notice of appeal does not include a statement of reasons, such statement must be filed with this office and the Board within 30 days after the notice of appeal is filed. The notice of appeal and any statement of reasons, written arguments, or briefs must also be served upon the Regional Solicitor, Pacific Southwest Region, U.S. Department of Interior, 2800 Cottage Way, E-1712, Sacramento, CA 95825.

All BLM decisions under 43 C.F.R. Parts 2800 (Rights-of-Way) remain in effect pending an appeal. The person filing the appeal (appellant) may also file a petition for a stay (43 C.F.R. §§ 2801.10 or 2881.10) which is a request to stop the actions allowed by the BLM decision. The IBLA will review the petition for a stay and may grant or deny the stay. If the IBLA takes no action on the stay within 45 days of the date the appeal was filed, the BLM decision will remain in full force and effect until IBLA makes a final ruling on the case.

If you wish to file a petition pursuant to regulations at 43 C.F.R. § 2801.10 or 43 C.F.R. § 2881.10 for a stay of the effectiveness of this decision during the time that your appeal is being reviewed by the IBLA, the petition for a stay must accompany your notice of appeal. A petition for a stay is required to show sufficient justification based on the standards listed below. Copies of the notice of appeal and petition for a stay must also be submitted to each party named in this decision and to the IBLA and to the appropriate Office of the Solicitor (see 43 C.F.R. § 4.413) at the same time the original documents are filed in this office. If you request a stay, you have the burden of proof to demonstrate that a stay should be granted.

Standards for Obtaining a Stay

Except as otherwise provided by law or other pertinent regulations, a petition for a stay of a decision pending appeal shall show sufficient justification based on the following standards:

1) the relative harm to the parties if the stay is granted or denied;
2) the likelihood of the appellant's success on the merits;
3) the likelihood of immediate and irreparable harm if the stay is not granted; and
4) whether the public interest favors granting the stay.

The effective date of this decision (and the date initiating the appeal period) will be the date this notice of decision is signed by the Authorized Officer.

Authorized Officer: /s/ Daniel Steward Date: 3/18/2010
Acting Field Manager
El Centro Field Office

TULE WIND METEOROLOGICAL TOWER INSTALLATION PROJECT ENVIRONMENTAL ASSESSMENT

Prepared for

Bureau of Land Management
El Centro Field Office
1661 S. 4th Street
El Centro, CA 92243

Prepared by

TETRA TECH EC, INC.
1940 E. Deere Ave., Suite 200
Santa Ana, CA 92705

January 2009

TABLE OF CONTENTS

TABLES

FIGURES

APPENDICES

LIST OF ABBREVIATIONS AND ACRONYMS

ACEC	Area of Critical Environmental Concern
APE	Area of Potential Effect
BLM	Bureau of Land Management
CDFG	California Department of Fish and Game
CESA	California Endangered Species Act
CFR	Code of Federal Regulations
cm	centimeter
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
DOE	Department of Energy
EA	Environmental Assessment
EPA	United States Environmental Protection Agency
ESA	Endangered Species Act
FR	Federal Register
ft	feet
IBR	Iberdrola Renewables, Inc.
km	kilometers
m	meters
MET	meteorological
msl	mean sea level
NAGPRA	Native American Graves Protection and Repatriation Act
NAHC	Native American Heritage Commission
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NRHP	National Register of Historic Places
OHV	off-highway vehicle
PM_{10}	particulate matter, less than 10 micrometers in diameter
ROT	Route of Travel
ROW	Right-of-Way
SBBM	San Bernardino Base Line and Meridian
SHPO	State Historic Preservation Officer
Tetra Tech	Tetra Tech EC, Inc.
USFWS	United States Fish and Wildlife Service

USGS	United States Geological Survey
VRM	Visual Resource Management

1.0 Introduction

Pacific Wind Development, LLC, a wholly owned subsidiary of Iberdrola Renewables, Inc. (IBR) holds a Type 2 Right-of-Way (ROW) for testing and monitoring wind energy, located on public lands administered by the Bureau of Land Management (BLM) El Centro Field Office in eastern San Diego County, California. The BLM issued the Type 2 ROW on January 1, 2004 (CACA-45248). In September 2004, an Environmental Assessment (EA) was prepared and approved for two meteorological (MET) stations within the ROW. The two MET stations are located along McCain Valley Road and are still in operation. On January 1, 2008, IBR applied for an amendment to the existing ROW to install and operate three additional MET towers and one Sodar unit within the same ROW area in an effort to collect more refined meteorological data. The proposed Tule Wind Meteorological Tower Installation Project (project) will help to determine whether the area is suitable for the installation of a wind-power generation facility. In support of the project efforts, Tetra Tech EC, Inc. (Tetra Tech) conducted a literature review (desktop study) and field surveys to identify key biological, cultural, and land use issues associated with the project to install three additional MET stations. This EA documents the results of the studies and evaluates the environmental impacts and cumulative effects from the project.

Tule Wind Meteorological Tower Installation Project
The Environmental Assessment #: CA-670-2008-77
The BLM (El Centro Field Office) Case File #: CACA-45248

1.1 Project Site Location

The IBR ROW is located in McCain Valley north of the community of Boulevard in eastern San Diego County, California (Figure 1, *Project Vicinity Map*) and is approximately 12,089 acres. The Tule Wind Meteorological Tower Installation project is located on federal lands managed by the BLM's El Centro Field Office. Regionally, the project area lies in the Peninsular Ranges between the Tecate Divide to the west and the In-Ko-Pah Mountains to the east. The region is mostly undeveloped and sparsely populated. The three proposed additional MET stations can be accessed by taking the McCain Valley Road north of the Interstate 8 in eastern San Diego County. This road runs through the IBR ROW.

The project area is dominated by chaparral vegetation characterized by rolling uplands with granite outcroppings and collections of very large granite boulders. Immediately east of the McCain Valley the vegetation changes to desert transition and the Peninsular Ranges drop off into steep canyon gorges with very little vegetation. These slopes terminate in the Colorado Desert plain surrounding the Salton Sea.

Three additional MET towers and one Sodar unit (at location 2) are proposed to be installed at three different MET monitoring station locations within the IBR ROW.

- Location One: San Bernardino Meridian, Township 16 South, Range 6 East, section 2, NW1/4 (lat/long: 32° 48' 45.4"N, 116° 20' 23.3" W (WGS-84)).

- Location Two: San Bernardino Meridian, Township 16 South, Range 6 East, section 17, SW1/4 (lat/long: 32° 46' 21.7"N, 116° 17' 17.6" W (WGS-84)).
- Location Three: San Bernardino Meridian, Township 17 South, Range 7 East, section 5, NE1/4 (lat/long: 32° 43' 31.1"N, 116° 16' 39.6" W (WGS-84)).

The three different MET monitoring station locations are found on two United States Geological Survey (USGS) 7.5 Minute Topographic Maps. Table 1, *Proposed MET Monitoring Station Locations* describes where each location is found on the USGS 7.5 Minute Topographic Map, and the Township, Range, and Section in which it is located. Table 1 also states the approximate elevation (mean sea level [MSL]) of each proposed MET monitoring station location.

Table 1
Proposed MET Monitoring Station Locations

MET Monitoring Station Location	USGS Topographic Map Quadrangle	Township	Range	Section	Approximate Elevation (feet MSL)
Location One	Sombrero Peak	16 South	6 East	2	3,660
Location Two	Sombrero Peak	16 South	6 East	17	4,480
Location Three	Live Oak Springs	17 South	7 East	5	4,120
California Quadrangle, San Bernardino Base Line and Meridian (SBBM)					

All three proposed MET monitoring station locations are within approximately 1 mile (1,586 m) of McCain Valley Road. These three MET monitoring station locations were chosen because these sites are located at points in existing topography where wind is unobstructed and the devices may record the best environmental data. The presence of existing routes was also taken into consideration in the location selection process.

1.1.1 Location One

Location One is located approximately 10.9 miles (17.5 km) north, north-west of the unincorporated community of Boulevard. Location One is on a low hill approximately 688 ft (209.7 m and 0.1 miles) from McCain Valley Road. The site includes outcroppings of up to 20 ft (6.1 m) high boulders among mature chaparral vegetation to 10 ft (3.1 m) high. A steep rock and boulder slope dropping about 60 ft (18.3 m) borders the location on the east. Some past vegetation clearing has been conducted in this area to approximately 15 ft (4.6 m) either side of McCain Valley Road.

1.1.2 Location Two

Location Two is located approximately 7.6 miles (12.2 km) north of the unincorporated community of Boulevard. Location Two is on a low knoll approximately 793 ft (241.7 m and 0.2 miles) from McCain Valley Road. The site consists of open, low chaparral vegetation to 8 ft (2.4 m) high with large boulders to 20 ft (6.1 m). Some past vegetation clearing has been conducted in this area within the last eight months between approximately 15 ft and 20 ft (4.6 m and 6.1 m) either side of McCain Valley Road and vegetation on-site is fairly sparse.

1.1.3 Location Three

Location Three is located approximately 4.2 miles (6.8 km) north of the unincorporated community of Boulevard. Location Three is approximately 6,320 ft (1,926.3 m and 1.2 miles) from McCain Valley Road following many BLM motorized routes. Location Three is located along an existing Off-Highway Vehicle (OHV) route of travel, on a ridge line west of the Lark Canyon OHV Area and Campground parking area (adjacent to the McCain Valley Road). This designated recreational area supports a number of OHV routes that show evidence of very regular use. The Location Three site consists of open chaparral vegetation to 10 ft (3.1 m) high with boulder outcroppings up to 25 ft (7.6 m) high. The surrounding vegetation away from the trails is fairly intact, with only moderate levels of disturbance.

1.2 Project Purpose and Need

The need to increase and diversify energy sources has become a top priority within California and the nation. Wind energy diversifies the nation's energy supply, uses a domestic, renewable resource, and produces almost no pollution by-products. The Department of Energy (DOE) has set a target goal for 20% of the nation's electric energy to be produced by wind by 2030 (DOE 2009). In 2001, President Bush issued Executive Order 13212, Actions to Expedite Energy-Related Projects which includes an emphasis on renewable energy development. More recently, on February 17, 2009, President Obama signed the American Recovery and Reinvestment Act (2009) which includes specific provisions supporting alternative energy development under Sections 45 and 46. Total funds allotted to the DOE Office of Energy Efficiency and Renewable Energy total US 16.8 billion dollars (ARIA 2009).

In California, the Governor's Energy Action Plan II establishes a state policy goal of producing 33% of California's electrical needs from renewable energy sources by 2020 (CEC 2008). In order to meet these goals, government and industry need to support the development of wind energy generation facilities throughout the nation. The installation of wind measurement equipment is an early step in determining the feasibility of developing a wind energy project.

On January 1, 2008, the BLM received an application to construct three additional MET stations in the IBR ROW in order to collect more refined meteorological data. As the lead regulator for energy development on public lands, the BLM is responsible for responding to Type 2 ROW Grant applications for analysis and testing of wind patterns (43 CFR Sections 2804 and 2807).

1.2.1 Land Use Plan Conformance

All three proposed MET station locations will occur within the McCain Valley portion of the Eastern San Diego Resource Management Planning Area (BLM 2009). This area is managed to provide for a variety of uses including renewable energy, wildlife conservation and recreation. Recreational activity in the area includes camping, hunting, hiking, horseback riding, backpacking, mountain biking, wildlife viewing, photography, and OHV use. The area encompasses 38,692 acres of the In-Ko-Pah Mountains. Installation of MET towers and Sodar unit is consistent with the allowable uses within this area under the Eastern San Diego Resource Management Plan.

1.3 Proposed Project - Alternative 1

Pacific Wind Development is proposing to install three additional MET monitoring towers and one Sodar unit at three different locations within their ROW (Figure 1). These MET devices are designed to collect data on wind patterns and these data will be used to determine whether the immediate area is suitable for the installation of a wind-power generating facility. These MET monitoring stations would consist of the MET devices listed and described below.

The approximate surface area of installation for each MET device is detailed in Table 2, *MET Device Surface Installation Areas*.

Table 2
MET Device Surface Installation Areas

MET Device	Square Feet (approximate)	Square Meters (approximate)	Acreage (approximate)
Sodar unit	60	5.6	0.001
MET tower and guy wired anchors	39	3.6	0.001
Sodar unit and MET Tower	99	9.2	0.002

1.3.1 Sodar Unit

Sodar (sonic detection and ranging system) units measure the wind profile from 49 to 656 ft in 33 ft increments (14.9 m to 200 m in 10.1-m increments). The Sodar unit measures approximately 9 ft high, 6 ft wide and 10 ft long (2.7 m high, 1.8 m wide, and 3.1 m long). The surface area of the installation of the Sodar unit will be approximately 60 square ft (5.6 square m and 0.001 acre). The Sodar unit is below the height (200 ft or 61 m) where the Federal Aviation Administration requires safety lighting.

The unit is housed in a trailer which can be transported to the site by a four-wheel drive pickup truck. The unit is installed by parking it at the desired location. The unit transmits data via a cell phone located in the trailer. All doors and wheels on the trailer are locked to protect against vandalism and theft. Sodar units of this kind can be removed in the same way they were installed, and their use is temporary in nature (ASP 2009). More information on the unit can be found at: www.minisodar.com. The Sodar unit is considered a temporary structure and would not require the use of heavy equipment or machinery, and minimal or no surface grading, or vegetation clearing to install or uninstall. A camouflage paint treatment and micro-siting among concealing vegetation and topography may be applied to the Sodar unit to help minimize impacts to visual resources. The Sodar unit is expected to be in place for a minimum of one year, with a possibility of up to three years depending on the quantity and quality of data collected by the device. The Sodar unit would be placed at Location 2 within 100-328ft of the MET tower base. This distance is sufficient for the Sodar unit to avoid interference from the tower.

There might an occasional need during the one to three year operation period for workers to visit the Sodar unit to address issues with the device. These issues could include the following: conduct maintenance and/or repairs on the device, test the equipment to see if the device is working correctly, address vandalism issues, address problems caused by weather and the environment.

1.3.2 MET Tower

Each MET tower consists of a NRG Systems Inc. 197 ft (60.1 m) tall, 8 inch (20.3 centimeters [cm]) diameter tower, supported by guy-wires fixed at four points, approximately 100 ft (30.5 m) from the tower base. The tower would be constructed of steel tube sections that slide together without the use of bolts or clamps. The MET tower base is mounted on a 9 square ft (0.8 square m) steel plate that rests on the surface of the ground. A gin pole would be used to tilt the tower up using a portable gasoline, or direct current-powered motorized, winch. The winch will use less than a gallon of fuel for the tower erections and, therefore, will not require refueling on BLM managed lands. The tower is instrumented with anemometers and wind vanes at several different heights, which are installed prior to raising the tower. A data logger inside a closed case is located at the base of the tower to record the wind data. The logger is powered by a small solar panel and a small dry cell battery package. The data will be transmitted via a cell phone located in the logger (NRG 2009). Site visits for tower inspection and maintenance will occur as needed.

As a safety measure, the top portion of the tower will have a red and white treatment to create visibility. The guy wires supporting each tower will also be fitted with a brightly colored ball, 12 inches (30.5 cm) in diameter near the top of each guy wire. Additionally, a 5 foot long protective wire covers around the guy wires, starting at ground level, which will be reflective to ensure that if collisions occur between recreationists and the wires there will be less chance of severe injuries occurring and to create visibility for recreational users. . The MET Tower is below the height (200 ft or 61 m) where the Federal Aviation Administration requires safety lighting. A diagram of the NRG Systems model and further information about the tower can be found at: http://www.nrgsystems.com/store/product_detail.php?cd=13&s=3973.

Construction of each MET tower is expected to take up to two days and involve two to three people, two trucks, and one ancillary vehicle. Construction of the MET tower does not require the use of heavy equipment or machinery. Each MET tower and associated equipment will be assembled on the ground at the site. The MET tower is considered a temporary structure and minimal or no surface grading, or vegetation clearing is required to install or uninstall this device. The MET tower is expected to be in place for a minimum of one year, with a possibility of up to three years depending on the quantity and quality of data collected by the device. Dismantling of the towers would involve the same process and would take approximately two days to complete.

There might be an occasional need during the one to three year operation period for workers to visit the MET tower to address issues with the device. These issues could include the following: conduct maintenance and/or repairs on the device, test the equipment to see if the device is working correctly, address vandalism issues, address problems caused by weather and the environment, check the guy wires, check the safety measures on the tower.

1.3.3 Site Access to the MET Monitoring Station Locations

Access to each MET monitoring station will be accomplished through vehicular travel using the best available established roads and trails while avoiding ground disturbance and established vegetation wherever possible. In this alternative, the access routes to each MET monitoring location can be seen in Figure 2, *Proposed Access to Location One*; Figure 3, *Proposed Access to Location Two*; and Figure 4, *Proposed Access to Location Three*. Road improvements are not anticipated to occur on any of the roads/trails in the project boundary. Note that the figures use the BLM terminology (final Route of Travel [ROT] designation) to classify routes into two categories (motorized and non-motorized). Due to the lack of BLM routes of travel at all locations, vehicle travel overland and off of BLM routes of travel for short distances [up to 500 ft (152.4 m and 0.09 miles)] will occur. Table 3, *Approximate Distances of Proposed Access Routes,* details approximately how long each proposed route is from the McCain Valley Road to the MET monitoring station location and the approximate distance of the overland portion of the access route. Access to each proposed MET location is discussed below in further detail.

Table 3
Approximate Distances of Proposed Access Routes

MET Monitoring Station Location	Approximate Distance of the Proposed Access Route from McCain Valley Road to the MET Monitoring Station Location	Approximate Distance of the Overland Portion of the Proposed Access Route
Location One	688 ft (209.7 m and 0.1 miles)	288 ft (87.8 m and 0.05 miles)
Location Two	793 ft (241.7 m and 0.2 miles)	793 ft (241.7 m and 0.2 miles)
Location Three	6,320 ft (1,926.3 m and 1.2 miles)	97 ft (29.6 m and 0.02 miles)

1.3.3.1 Access to Location One

McCain Valley Road is the only road in the vicinity of Location One (Figure 2). From McCain Valley Road the proposed vehicle access route to Location One will follow an existing BLM "non-motorized" route (BLM ID #63) for approximately 400 ft (121.9 m and 0.08 miles) and then continue overland to the proposed MET monitoring station location for a distance of approximately 288 ft (87.8 m and 0.05 miles). The total distance of the proposed access route from McCain Valley Road to the MET monitoring station location is approximately 688 ft (209.7 m and 0.1 miles); however, 400 ft of that is the BLM "non-motorized" trail. The entire proposed access route from McCain Valley Road was surveyed for biological and cultural resources.

1.3.3.2 Access to Location Two

McCain Valley Road is the only road in the vicinity of Location Two (Figure 3). Temporary ramps will be used to traverse an approximately 3 ft (0.9 m) high bank between the road and the site and avoid soil disturbance. The overland access route from McCain Valley Road to the MET monitoring station location is approximately 793 ft (241.7 m and 0.2 miles) in length and follows what appears to be an existing illegal OHV trail. Recent tracks were noted during the biological and cultural survey. This location is also proposed for the Sodar unit. Vegetation within 15 to 20 ft on both sides of the road has already been previously cleared in this area. The entire proposed access route was surveyed for biological and cultural resources.

1.3.3.3 Access to Location Three

Vehicle access to Location Three will occur on mapped BLM OHV routes of travel, from McCain Valley Road, the route of travel to Location Three will include Route ID #320/328 to Route ID #313 to Route ID #312 to Route ID #311 to Route ID #305. If necessary, construction crews will either utilize off highway vehicles rather than full-size trucks due to the steepness of the terrain or choose one of the other existing routes within the Lark Canyon network to gain access to the proposed MET location. The approximate distance of this proposed access route on existing roads/trails is 6,223 ft (1,896.8 m and 1.2 miles). Location Three will be accessed overland from the existing BLM "Ridge Trail" (Route ID # 305) OHV route to the proposed MET monitoring station location for a distance of approximately 97 ft (29.6 m and 0.02 miles). The entire proposed access route was surveyed for biological and cultural resources.

1.3.3.4 Overland Vehicle Access Procedures for All Locations

In the locations where vehicle travel off of BLM official routes are proposed, a 30 ft wide overland access route will be clearly marked with flagging to ensure that all vehicles stay within the biological and culturally surveyed areas. Dense vegetation and rock outcrops will be avoided; however, it is anticipated that minor impacts such as crushed vegetation and soil disturbance will occur during the off-route transport. The same overland route used to access the monitoring stations will be used for egress. No shrub vegetation will be cleared/bladed using machinery; however minimal shrub vegetation will be impacted during overland travel to install and later remove equipment. All vehicle tracks will be raked out after installation and later removal of the MET equipment. This will help not to draw attention to the overland route and

create an illegal trail. Any vegetation that was knocked over by the vehicles and trailer towing will then be used to cover the trail.

1.4 Project Alternatives

Two alternatives including the no action alternative were considered and are discussed below.

1.4.1 Overland On-Foot Access Only - Alternative 2

Under this alternative, the short distance, overland access routes for the MET towers (Locations One and Three) would be accomplished on-foot where McCain Valley Road or the BLM routes of travel end. The vehicles transporting the MET tower's associated equipment would use McCain Valley Road and other BLM routes of travel and when near the MET monitoring station locations, the vehicles would park alongside the route in the nearest location to the proposed MET station. Foot crews would then carry the MET tower associated equipment through the vegetation to the MET monitoring station location. Crews would use the path of least resistance and walk through existing sparse vegetation and flat topography. Minor disturbance to vegetation is expected with this installation process for the MET tower. The overland on-foot procedure applies only to MET station Locations One and Three. Under this alternative, the construction of the MET monitoring tower and Sodar unit at Location Two would allow overland vehicle access as outlined in the proposed action for Location Two as the placement of the Sodar Unit requires the use of a vehicle and trailer.

1.4.2 No Action Alternative - Alternative 3

Under the no action alternative, Pacific Wind Development would not install the three MET towers or the Sodar unit in the project ROW. As a result, no additional information on wind patterns in the area would be available to assess the area's potential to provide wind-generated electricity.

1.5 Alternatives Considered But Eliminated From Further Analysis

1. 5.1 Alternative MET Monitoring Station Locations

Several alternate locations for the three MET device sites were considered and dismissed because these locations where not located at points in existing topography where wind is unobstructed. Therefore, alternate MET monitoring station locations were eliminated as a viable alternative.

2.0 Environmental Impacts

2.1 Uses or Resources Not Present and Not Affected

The following elements do not exist on the MET monitoring station locations and will not be affected by the project action or any of the alternatives. The following elements will not be discussed further within this EA.

2.1.1 Farmlands, Prime/Unique

There is no designated or proposed Prime or Unique Farmlands as designated by the California Department of Conservation near any of the proposed MET monitoring station locations. Implementation of the project action would have no affect on designated or proposed Prime or Unique Farmlands.

2.1.2 Wild and Scenic Rivers

There are no waterways designated under the federal Wild and Scenic Rivers Act of 1968 as wild and scenic rivers near any of the proposed MET monitoring station locations. Implementation of the project action would have no affect on Wild and Scenic Rivers.

2.1.3 Wilderness Areas

The project action will not take place in any designated or proposed wilderness areas or areas meeting the criteria of the National Wilderness Preservation Act of 1964 (Figure 5, *Special Management Areas within the Project Vicinity*). The nearest wilderness areas in the immediate region include the following listed below.

- The boundary to the Carrizo Gorge Wilderness Area is located 1.5 miles (2.4 km) from the nearest proposed MET monitoring station location (Location Two).
- The boundary to the Sawtooth Mountains Wilderness Area is located 1.1 miles (1.8 km) from the nearest proposed MET monitoring station location (Location One).
- The boundary to the Anza Borrego State Park is located approximately 0.8 miles (1.3 km) from the closest proposed MET monitoring station location (Location One).

Implementation of the project action would have no affect on designated or proposed wilderness areas.

2.1.4 Areas of Critical Environmental Concern

The BLM In-Ko-Pah Mountains Area of Critical Environmental Concern (ACEC) borders the IBR ROW and briefly crosses the eastern limit of the ROW near Location Two (Figure 5). However, Location Two is approximately 0.2 mile (0.3 km) from the In-Ko-Pah Mountains ACEC boundary. Location One occurs approximately 0.3 mile (0.5 km) west of the ACEC and Location Three occurs approximately 0.7 mile (1.1 km) west of the ACEC. The project action

will not take place within the In-Ko-Pah Mountains ACEC or any other designated or proposed ACECs. Implementation of the project action would have no affect on any ACEC.

2.1.5 Wastes, Hazardous or Solid

The project action will take place on undeveloped rural lands and there would be no hazardous or solid waste generated by the MET device construction or operation. Gasoline and diesel fuel would be used to power vehicles needed to transport and erect each of the three MET devices. However, no fuels will be stored at any of the sites. Support vehicles would be fueled at approved fueling stations off-site and driven to and from the respective sites. Upon completion of the data collection efforts, the MET devices and all recoverable components would be removed from each of the three MET monitoring station locations. Any components deemed to be unrecoverable would be disposed of in approved landfills.

2.1.6 Floodplains

Floodplain issues related to public safety, conservation, and economics are governed by Executive Order 11988 (Floodplain Management). This measure requires avoidance of incompatible floodplain development, consistency with the standards and criteria of the National Flood Insurance Program, and restoration and preservation of natural and beneficial floodplain values. Because each of the three MET monitoring station locations are located on hilltops or ridges far removed from floodplains, implementation of the project action would have no effect on floodplain capacity, floodplain ecological values, or public safety.

2.1.7 Wetlands/Riparian Zones

The three MET monitoring station locations are on hills, ridge-lines, or other uplands, and no excavation is required for the MET devices installation. A small drainage running through the Cottonwood Campground and recreation area is the closest water course and riparian wetland area approximately 0.87 mile (1.4 km) from Location One. Implementation of the project action would have no affect on wetlands or riparian zones.

2.1.8 Water Quality, Surface and Groundwater

The only impervious area in the MET tower installation would be the small base plate 9 square ft (0.8 square m) into which the tower tubing is inserted. The Sodar unit is housed on a trailer of approximately 60 square ft (5.6 square m). These small impervious surfaces would have no adverse effect on either surface water flow or groundwater recharge. It is anticipated that no grading, excavation or access road creation would be required for installation or removal of the MET devices. Therefore, ground disturbance and sediment production will be negligible. Drilling performed to secure guy wire anchor bolts into the ground will also introduce an impervious surface of only a few square inches per anchor bolt and produce an affect that is negligible. The project would have no affect on water quality, surface and groundwater because no hazardous materials other than gasoline and diesel to fuel vehicles would be involved in project construction or operation.

2.1.9 Energy

The project action has been reviewed to determine if it would have either a direct or indirect adverse impact on energy development, production, supply, and/or distribution as required by Executive Orders 13211 and 13212 of May 18, 2001, pursuant to Instruction Memorandum Number 2002-053 of December 12, 2001. Implementation of the project action would not adversely affect energy development, production, supply, and/or distribution.

2.1.10 Environmental Justice

Executive Order 12898 (Federal Actions to Address Environmental Justice in Minority Populations and Low Income Populations) describes environmental justice requirements for federal agencies. It was issued by President Clinton on February 11, 1994, and requires federal agencies to consider disproportionately high and adverse environmental effects on minority and low-income populations. The project action would be temporary in nature, and would have no adverse effects on human health. The project would occur on public lands at least 2 miles (3.2 km) from the nearest established residential community and 1.2 miles (1.9 km) from the nearest private residence.

2.2 Uses or Resources Present that May be Affected

The following critical elements are present and may be affected by the project action or by the project alternatives (Alternative 2- Overland On-Foot Access Only and Alternative 3-the No Action). These critical elements are considered in detail below.

2.2.1 Wildlife Management Areas

Alternative 1

Under the proposed action, the three METs and one Sodar unit will be installed as outlined above in Section 1.3. All three proposed MET device installations and one sodar unit will occur within the McCain Valley National Cooperative Land and Wildlife Management Area. Established in 1963, the McCain Valley Resource Conservation Area is managed to provide for a variety of uses including wildlife conservation, livestock grazing, and recreation. In addition, U.S. Fish & Wildlife Service Critical Habitat for Peninsular Bighorn Sheep occurs outside of the IBR ROW, directly to the east (Figure 5). Installation of MET devices is expected to remain consistent with all allowable management uses within this area. Therefore, implementation of the project action would have a negligible effect on wildlife management areas.

Alternative 2

Under Alternative 2, the three METs and one Sodar unit would be installed using pedestrian access at locations 1 and 3, and using motor vehicles at location 2. This would result in 785 ft (239.2 m and .148 miles) less vehicle ground disturbance, resulting in less potential disturbance in the wildlife management area.

Alternative 3

Under the No Action alternative, no METs or Sodar units would be installed. Therefore, there would be no effect on wildlife management areas.

2.2.2 Recreation

The IBR ROW is located within the BLM McCain Valley Special Recreation Management Area (SRMA). Recreational activities occurring in the project vicinity include OHV use, hunting, camping, mountain biking, hiking, horseback riding, backpacking, wildlife viewing, and photography. Four popular hiking trails begin or end along this portion of McCain Valley Road, including the Pepperwood and Jim Canyon trails (Schad 1998). The following recreation/overlook sites are located near each of the proposed MET monitoring station locations (Figure 5).

- Location One is located approximately 0.87 mile (1.4 km) from the Cottonwood Campground and recreation area.
- Location Two is located approximately 0.37 miles (0.6 km) from the Carrizo Overlook.
- Location Three is located approximately 0.5 miles (0.8 km) from the Lark Canyon OHV staging area and campsite.
- Location Three is also located approximately 10 ft (3.1 m) from an active OHV trail (BLM 2009). The guy wires for this MET location will not be placed within or near the OHV trail, as not to interfere with OHV travel.

None of the proposed MET devices would be located within a designated campground area or scenic overlook. Location Three is located within an OHV use area, but would not interfere with access or use of any existing OHV trails. The proposed MET device would not be sited immediately adjacent to hiking or biking trails. Construction and operation of the MET towers would also incorporate safety features such as colored guy wire covers to ensure that collisions do not occur between recreationists and the wires. The guy wires will not affect the trail. In addition, MET device installation will not have a substantial adverse affect on OHV, biking, or hiking activities because of the MET devices' relatively small footprint on the existing environment. However, there is a potential to create illegal trails with the two-track-trail used to install/uninstall the Sodar unit. It is anticipated that the proposed recreation protection measures described in Section 2.2.2.1, *Recreation Protection Measures* would help to avoid or minimize potential impacts to recreation. Therefore, implementation of the project action would have a negligible effect on recreation.

Alternative 1

Under the proposed action, the three METs and one Sodar unit will be installed as outlined above in Section 1.3.

Alternative 2

Under Alternative 2, the three METs and one Sodar unit would be installed using pedestrian access at locations 1 and 3, and using motor vehicles at location 2. This would result in 785 ft (239.2 m and .148 miles) less vehicle ground disturbance along access routes reducing the possibility of creating new unapproved routes of travel.

Alternative 3

Under the No Action alternative, no METs or Sodar units would be installed. Therefore, there would be no effect on recreational activities.

2.2.2.1 Recreation Protection Measures

This section describes recreation avoidance and protection measures that will be utilized during project implementation, to the extent practical.

- So as not to create an illegal trail, no shrub vegetation will be cleared/bladed using machinery; however minimal shrub vegetation will be impacted during overland travel to install and later remove the Sodar unit.
- If an overland two-track-trail is created to install/uninstall the Met towers and Sodar unit, the contractor will rake out their tracks so as not to draw attention to the route and create an illegal trail. They will also try to cover and hide the route with any vegetation that was knocked over by the vehicle and trailer towing the Sodar unit.
- Construction and operation of the MET towers would also incorporate safety features such as 5 foot long protective wire covers around the guy wires which will be reflective to ensure that if collisions occur between recreationists and the wires there will be less chance of severe injuries occurring and to create visibility for recreational users.

2.2.3 Air Quality

Alternative 1

Under the proposed action, the three METs and one Sodar unit will be installed as outlined above in Section 1.3. The project action would be implemented within the San Diego County Air Pollution Control District. Under current and 2010 (proposed) standards, the United States Environmental Protection Agency (EPA) has designated San Diego County as a non-attainment area for state and federal ozone and inhalable particulate matter (PM_{10}) standards. However, this county designation is based on non-attainment only within the foothills of the coastal slope, approximately 25 miles (40.2 km) west of the project area (County of San Diego 2008).

Implementation of the project action would generate temporary low levels of emissions of reactive organic gases, nitrogen oxides, and PM_{10} dust. These emissions would be generated by gasoline and diesel fuel combustion during operation of vehicles on exposed soils. However, these emissions would be restricted to the one to two-day period for each of the three MET device installation and dismantling. Total pollutants emitted by construction activities would be considerably below the federal conformity significance thresholds. The Sodar unit and MET tower will not have emissions during the one-to-three years of operation. Operation of the project during the one to three year time period would not result in impacts to air quality other than the occasional fugitive dust and emissions from vehicles during infrequent MET device maintenance, if it needed to occur. The vehicles would use McCain Valley Road and other motorized roads. When near the MET monitoring station location, the vehicles would park once the route becomes impassable. Foot crews would walk through the vegetation to the MET monitoring station location to perform maintenance. Impacts to air quality also come from other vehicle emissions from OHV and other recreationists in the area.

The project requires no permits from the San Diego Air Pollution Control District. Implementation of the project action is expected to have a negligible effect on regional air quality.

Alternative 2

Under Alternative 2, the three METs and one Sodar unit would be installed using pedestrian access at locations 1 and 3, and using motor vehicles at location 2. This would result in 785 ft (239.2 m and .148 miles) less vehicle ground disturbance along access routes, resulting in less PM_{10} fugitive dust. This alternative would also create slightly less reactive organic gases associated with vehicle emissions.

Alternative 3

Under the No Action alternative, no METs or Sodar units would be installed. Therefore, there would be no effect on regional air quality.

2.2.4 Visual Resources

2.2.4.1 Existing Visual Environment

The project action will occur on public lands with few existing artificial structures. Currently, structures include restroom facilities, picnic tables, and a 40 ft historic windmill, each located in existing BLM campgrounds at Lark Canyon and Cottonwood Creek. Two existing MET towers are located along McCain Valley Road and are visible from various points along this road. In addition there is a wind energy generating facility (consisting of 25 wind turbines) at the Manzanita Indian Reservation to the west is visible from most points along McCain Valley Road. The primary use of this area, historically and at present, is for outdoor recreation.

The cumulative effect on visual resources at each proposed location would be determined by the type of MET device(s) chosen for each site, and each device's location and alignment in the landscape. The BLM has created Visual Resource Management (VRM) classes for the potential effects of MET devices and other structures for evaluating visual resources on BLM lands (BLM 2008) (Figure 6, *BLM Visual Resource Management Areas*). BLM VRM classes are described below:

- **Class 1** – To preserve the existing character of the landscape. This class provides for natural ecological changes; however, it does not preclude very limited management activity. The level of change to the characteristic landscape should be very low and must not attract attention.

- **Class 2** – To retain the existing character of the landscape. The level of change to the characteristic landscape should be low. Management activities may be seen, but should not attract the attention of the casual observer. Any changes must repeat the basic elements of form, line color, and texture found in the predominant natural features of the characteristic landscape.

- **Class 3 –** To partially retain the existing character of the landscape. The level of change to the characteristic landscape should be moderate. Management activities may attract attention, but should not dominate the view of the casual observer. Changes should repeat the basic elements found in the predominant natural features of the characteristic landscape.

- **Class 4** – To provide for management activities that require major modification of the existing character of the landscape. The level of change to the characteristic landscape can be high. These management activities may dominate the view and be the major focus of viewer attention. However, every attempt should be made to minimize the impact of these activities through careful location, minimal disturbance and repeating the basic landscape elements.

The IBR ROW lies within BLM VRM Class 4 (Figure 6). In addition, the project has been evaluated to determine whether it would:

- Result in impacts to visual resources along designated California scenic highways.
- Result in substantial damage to scenic resources, such as trees, rock outcroppings, or historic resources along a designated state scenic highway.
- Substantially degrade the existing visual character or quality of a site and its surroundings.
- Create a new source of light or glare that adversely affects day or nighttime views.

2.2.4.2 Proposed Visual Environment

All locations will require a MET tower and a Sodar unit at Location Two. Due to the differences in height, bulk, and materials, the visual impact of the MET tower as compared to the Sodar unit would differ substantially. As such, the visual resources' impact analysis for each combination of

these temporary activities will be examined separately for both the construction/dismantling and operation phases of the proposed project.

Construction and Dismantling Phase

During MET tower or Sodar unit construction and dismantling, activities may be visible from nearby roads, trails, campgrounds, or recreation areas. However, the short-term nature of these construction activities (one to two days for erection and dismantling) would not result in a substantial impact on existing viewsheds. Once erected, the MET devices would be left in place to collect wind data for approximately one to three years. Consequently, the remainder of this discussion examines how these devices would affect existing visual resources during the period of operation.

Operation Phase

- The MET towers or Sodar units would not be located near or adjacent to a California designated scenic highway and, therefore, would not alter any visual resources associated with California's scenic highways.
- Construction or dismantling of MET towers or Sodar units requires no heavy equipment or excavation. Therefore, construction is not expected to damage scenic physical resources such as rock formations, trees and vegetation, historic buildings, or other aesthetic features.
- All installation activities would be located in areas far removed from sensitive receptors such as schools and hospitals, and would be located a minimum of approximately 1.2 miles (1.9 km), from the nearest residence. This distance and topographic barriers would make these MET devices virtually invisible from these residences.
- In addition, with the exception of safety markings, the devices are not constructed from highly reflective materials and are not expected to cause glare or reflection that would interfere with daytime views in the area.

2.2.4.2.1 Location One

Location One is on a low hill approximately 688 ft (209.7 m and 0.1 miles) from McCain Valley Road. The site includes outcroppings of up to 20 ft (6.1 m) high boulders among mature chaparral vegetation to 10 ft (3.1 m) high. A steep rock and boulder slope dropping about 60 ft (18.3 m) borders the location on the east. Some past vegetation clearing has been conducted in this area to approximately 15 ft (4.6 m) either side of McCain Valley Road. There are no artificial objects in the immediate vicinity; however, the existing Manzanita Reservation wind turbines are visible approximately 5 miles (8.1 km) to the southwest. Location One is also within 0.87 mile (1.4 km) of the Cottonwood Campground and recreation area, which is a popular camping, hiking, and bird-watching area.

- **MET tower:** due to the uninterrupted slope surrounding Location One, a MET tower would be visible from the Cottonwood Campground and recreation area. Although a MET tower would be the closest artificial object in the existing viewshed, its visual impact would be no greater than the view of the Manzanita Reservation wind facility which is also visible from the campground and McCain Valley Road. The visual impact of the MET tower is not considered adverse because of its remote location and because it would be temporary.

For these reasons, implementation of the project action at Location One would not be adverse to visual resources. It is anticipated that the proposed visual protection measures described in Section 2.2.4.3, *Visual Resource Protection Measures* would help to avoid or minimize potential impacts to visual resources.

2.2.4.2.2 Location Two

Location Two is on a low knoll approximately 793 ft (241.7 m and 0.2 miles) from McCain Valley Road. The site consists of open, low chaparral vegetation to 8 ft (2.4 m) high with large boulders to 20 ft (6.1 m). Some past vegetation clearing has been conducted in this area within the last eight months between approximately 15 ft and 20 ft (4.6 m and 6.1 m) either side of McCain Valley Road and vegetation on-site is fairly sparse. There are no artificial objects in the immediate vicinity; however, the existing Manzanita Reservation wind turbines are visible approximately 4 miles (6.4 km) to the southwest. Location Two is approximately 0.37 mile (0.6 km) from the Carrizo Overlook viewpoint and close to popular hiking and bird-watching areas. The proposed location is upslope from the Carrizo Overlook and obscured from the overlook at ground level by topography and existing vegetation.

- **MET tower:** due to close proximity and gently sloping topography, a MET tower installation at this location would be clearly visible from the Carrizo Overlook. The MET tower would affect existing viewsheds by introducing a tower into an area that currently has no tall artificial structures in the immediate vicinity.

- **Sodar unit:** due to the knoll location and sparse vegetation at this site, even the low profile of 9 ft (2.7 m) for the Sodar unit would be visible from a distance at this location, but it would not be visible from the Carrizo Overlook location. However, the potential impact of this installation would not be adverse because it will occur in a remote area, be partially obscured by existing vegetation and rock outcroppings, and will be temporary.

For these reasons, implementation of the project action at Location Two would not be adverse to visual resources. It is anticipated that the proposed visual protection measures described in Section 2.2.4.3 would help to avoid or minimize potential impacts to visual resources.

2.2.4.2.3 Location Three

Location Three is located along an existing OHV trail, on a ridge line approximately 6,320 ft (1,926.3 m and 1.2 miles) from McCain Valley Road. The site consists of open chaparral vegetation to 10 ft (3.1 m) high with boulder outcroppings up to 25 ft (7.6 m) high. Recreation activities common in the area include camping, OHV use, mountain biking, hiking, and bird-watching. Currently there are no artificial objects visible in the immediate vicinity of the proposed location; however, the existing Manzanita Reservation wind turbines are visible approximately 4 miles (6.4 km) to the west. Other artificial objects including restrooms, picnic tables, and a historic weathervane approximately 40 ft (12.2 m) high are found within the Lark Canyon Campground area approximately 1.2 miles (1.9 km) distant.

- **MET tower**: existing topographic barriers make it unlikely that a MET tower would be visible from the Lark Canyon Campground and McCain Valley Road, but the installation would be visible from the active OHV trails. As such, installation of a MET tower would result in a change in views in the OHV area because it would introduce a tower into an area that currently has no other similar artificial objects. However, the potential impact of this installation would not be adverse because it will occur in a remote area, be partially obscured by existing vegetation and rock outcroppings, and will be temporary.

For these reasons, implementation of the project action at Location Three would not be adverse to visual resources. It is anticipated that the proposed visual protection measures described in Section 2.2.4.3 would help to avoid or minimize potential impacts to visual resources.

Alternative 1

Under the proposed action, the three METs and one Sodar unit will be installed as outlined above in Section 1.3. The short-term nature of these construction activities (one to two days for erection and dismantling) would not result in a substantial impact on existing viewsheds.

Location 1:
Although a MET tower would be the closest artificial object in the existing viewshed, its visual impact would be no greater than the view of the Manzanita Reservation wind facility and the visual impact of the MET tower is not considered adverse because of its remote location and because it would be temporary. For these reasons, implementation of the project action at Location One would not be adverse to visual resources.

Location 2:
The MET tower would affect existing viewsheds by introducing a tower into an area that currently has no tall artificial structures in the immediate vicinity. The potential impact of the Sodar unit would not be adverse because it will occur in a remote area, be partially obscured by existing vegetation and rock outcroppings, and will be temporary. Provided that the Visual Resource Protection Measures outlined in 2.2.4.3 are adhered to implementation of the project action at Location Two would not be adverse to visual resources.

Location 3:
Installation of a MET tower would result in a change in views in the OHV area because it would introduce a tower into an area that currently has no other similar artificial objects. However, the potential impact of this installation would not be adverse because it will occur in a remote area, be partially obscured by existing vegetation and rock outcroppings, and will be temporary. For these reasons, implementation of the project action at Location Three would not be adverse to visual resources.

Alternative 2

Under alternative 2, there is no significant difference in installation than the proposed action. As a result, provided that the Visual Resource Protection Measures outlined in 2.2.4.3 are adhered to, the action will not be adverse to visual resources.

Alternative 3

Under the no action alternative Pacific Wind Development would not install the three MET towers or the Sodar unit in the project ROW. As a result, there will be no effect to visual resources.

2.2.4.3 Visual Resource Protection Measures

This section describes visual avoidance and protection measures that will be utilized during project implementation, to the extent practical.

- Due to the colorful safety features required for the MET towers, no concealing treatments can be employed for these devices. However, a camouflage paint treatment and micro-siting among concealing vegetation and topography may be applied to the Sodar unit to minimize impacts to visual resources.

2.2.5 Biological Resources

Prior to the field surveys, Tetra Tech biologists reviewed available literature and databases regarding biological resources within the project vicinity to identify sensitive biological resources such as special status plant and wildlife species having the potential to occur within the project area. Literature reviewed and consulted included the following listed below.

- California Natural Diversity Database (CNDDB) search for the USGS 7.5 Minute Topographic Map Sombrero Peak, Sweeney Pass, Live Oak Springs, and Jacumba Quadrangles (CDFG 2008a). (Figure 7, *CNDDB Special Status Species Records*).
- United States Fish and Wildlife Service (USFWS), and BLM databases.
- Natureserve.org (NatureServe).
- California Native Plant Society (CNPS 2001).
- Jepson Manual (Hickman 1993).
- San Diego Natural History Museum (SDNHM 2004).
- Various other project related studies (BLM 2008; CDFG 2008b USFWS 2008a, 2008b; IBR 2009).

Tetra Tech studies included Avian Surveys conducted between September 2007 and September 2008 (four seasons) for 16 point count locations within the IBR ROW (Tetra Tech 2009). Bat studies recording data at the two current MET tower locations, beginning in September 2008 and completed in September 2009. Additional research into the likely presence of arroyo toad (*Anaxyrus californicus*) and quino checkerspot butterfly (*Euphydryas editha quino*) was conducted using regional data sources and local authorities and are detailed later in this EA.

This review included a CNDDB species record search (CDFG 2008b) for the following USGS 7.5 Minute Topographic Map Quadrangles: Sombrero Peak, Sweeney Pass, Live Oak Springs, and Jacumba (Appendix A, *CDFG-CNDDB Species Records for the Sombrero Peak, Sweeney Pass, Live Oak Springs, and Jacumba Quadrangles*) as well as a CNDDB map data search to 5 miles (8 km). Additional searches included the BLM list of plant and animal species of special management concern on non-wilderness BLM California Desert District Area lands under the Eastern San Diego County Regional Management Plan (Appendix B, *BLM List of Plant and Animal Species of Special Management Concern in the Eastern San Diego County Regional Management Plan*), as well as selected individual species profiles for special-status plants and wildlife on the CDFG and CNPS websites (CDFG 2008b, CNPS 2001).

An inventory of listed, candidate, and sensitive plant and wildlife species was derived from the literature review. This, in addition to the query of the CNDDB for reported locations of listed and sensitive plant and wildlife species and sensitive natural communities, identified the known locations of rare, threatened, and endangered species and significant natural communities in the region and assisted in identifying the potential for on-site occurrence of such species. The life history and survey requirements for listed, candidate and sensitive plant and wildlife species were identified through the literature review.

An inventory of listed, candidate, and sensitive plant and wildlife species was derived from the literature review. This, in addition to the query of the CNDDB for reported locations of listed and sensitive plant and wildlife species and sensitive natural communities, identified the known locations of rare, threatened, and endangered species and significant natural communities in the region and assisted in identifying the potential for on-site occurrence of such species. The life history and survey requirements for listed, candidate and sensitive plant and wildlife species were identified through the literature review.

As a result of the literature review, 24 plant species were identified as having the potential to occur within the region of the project site. A species was determined to have no potential to occur within the project area if the project area was located outside the species' known distributional range, and/or the species' known elevational range. A number of plant species were determined to have no potential to occur within the project area and were therefore eliminated from further evaluation. From this evaluation it was determined that 15 plant species have the potential to occur, or are known to occur, within the region of the project area and are thus listed below.

Listed Endangered, Threatened, Candidate and State Rare Plants

- Parish's meadowfoam (*Limnanthes gracilis* ssp. *parishii*)

Sensitive and Locally Important Plants

- spearleaf (*Matelea parvifolia*)
- sticky geraea (*Geraea viscida*)
- Tecate tarplant (Tecate tarweed) (*Deinandra floribunda*)
- San Diego sunflower (*Hulsea californica*)

- Fremont barberry (*Berberis fremontii*)
- Payson's jewel-flower (Payson's wild cabbage) (*Caulanthus simulans*)
- southern jewel-flower (*Streptanthus campestris*)
- Peninsular manzanita (*Arctostaphylos peninsularis* ssp. *peninsularis*)
- Jacumba milk-vetch (*Astragalus douglasii* var. *perstrictus*)
- Mountain Springs bush lupine (*Lupinus excubitus* var. *medius*)
- hairy stickleaf (*Mentzelia hirsutissima*)
- slender-leaved ipomopsis (slenderleaf skyrocket) (*Ipomopsis tenuifolia*)
- desert beauty (*Linanthus bellus*)
- California ayenia (*Ayenia compacta*)

2.2.5.1.1 Wildlife Special Status Species Identification

A species was determined to have no potential to occur within the project area if the project area was located outside the species' known distributional range, and/or the species' known elevational range. A number of wildlife species were determined to have no potential to occur within the project area and were therefore eliminated from further evaluation. From this evaluation it was determined that 28 wildlife species have the potential to occur, or are known to occur, within the region of the project area and are thus listed below.

Listed Endangered, Threatened, and Candidate Wildlife

- quino checkerspot butterfly (*Euphydryas editha quino*)
- arroyo toad (*Anaxyrus californicus*)
- barefoot banded gecko (Switak's banded gecko) (*Coleonyx switaki*)
- Swainson's hawk (*Buteo swainsoni*)
- southwestern willow flycatcher (*Empidonax traillii extimus*)
- least Bell's vireo (*Vireo bellii pusillus*)
- Peninsular bighorn sheep (Distinct Population Segment) (*Ovis canadensis nelsoni* DPS)

Sensitive and Locally Important Wildlife

- coast (San Diego) horned lizard (*Phrynosoma coronatum* (*blainvillii* population))
- coastal whiptail (coastal western whiptail) (*Aspidoscelis tigris stejnegeri*)
- rosy boa (*Charina trivirgata*)
- northern red-diamond rattlesnake (*Crotalus ruber ruber*)
- golden eagle (*Aquila chrysaetos*)
- prairie falcon (*Falco mexicanus*)
- burrowing owl (*Athene cunicularia*)
- gray vireo (*Vireo vicinior*)
- tricolored blackbird (*Agelaius tricolor*)
- Dulzura pocket mouse (*Chaetodipus californicus femoralis*)
- San Diego desert woodrat (*Neotoma lepida intermedia*)
- southern grasshopper mouse (*Onychomys torridus ramona*)
- San Diego black-tailed jackrabbit (*Lepus californicus bennettii*)
- California leaf-nosed bat (*Macrotus californicus*)
- western mastiff bat (western bonneted bat) (*Eumops perotis californicus*)

- pocketed free-tailed bat (*Nyctinomops femorosaccus*)
- Townsend's big-eared bat (*Corynorhinus townsendii*)
- pallid bat (*Antrozous pallidus*)
- western small-footed myotis (small-footed bat) (*Myotis ciliolabrum*)
- long-eared myotis (long-eared bat) (*Myotis evotis*)
- Yuma myotis (Yuma bat) (*Myotis yumanensis*)

2.2.5.2 Biological Field Survey Methods

A Tetra Tech biologist conducted a reconnaissance-level, habitat assessment of the three MET monitoring station locations on April 29, and 30, 2009. This biological resources survey was conducted concurrently with the Tetra Tech archeological resources survey to ensure that each installation location chosen would avoid impacts to either biological or archeological sensitive resources.

The biological field survey was conducted within a radius of approximately 328 ft (100 m) of each MET monitoring station location to ensure full coverage of the Area of Potential Effect (APE) for each proposed MET device. The assessment consisted of visiting each MET tower location and conducting a general habitat assessment, including the visual identification and selected photography of general topographic features, soils, hydrology and individual plant and wildlife species. The APE for the proposed access routes (non-existing roads or OHV trails) for accessing each MET monitoring station location consisted of a 15 ft (4.6 m) on either side of a center line, or a 30 ft (9.1 m) corridor. Approximately 8 acres were surveyed at Location One, approximately 8.08 acres was surveyed at Location Two, and approximately 11.88 acres was surveyed at Location Three.

Plant communities present, potential habitat for common or special-status species, and presence of special-status species or evidence of special-status species, were noted at each site. When necessary, plant specimens were photographed for final identification. The presence of noxious or invasive weeds was also documented throughout the site. Habitat features that could support special-status plant and animal species and that were visible from the sites were noted, irrespective of the distance from the site. Each site was photographed to document environmental features or species. The mapping of features was limited to jurisdictional wetlands and documentation of threatened or endangered species occurrences. The timing of the survey in late April is ideal for identification of plant specimens in either fruit or flower, and favorable as an active period for identification of a wide variety of fauna.

2.2.5.2.1 Survey Limitations

Conducting the field surveys in the spring decreased the detection of summer, fall and winter blooming plant species. Therefore, some plant species could not be identified because the blooming period was missed. A standard in the professional practice of botany is to conclude species absence in only a few limited instances:

- Where the species is detectable without flowers or fruits (e.g., perennial shrubs with distinctive vegetative features).
- Suitable habitat to support the species is clearly absent.

- Numerous surveys over many years have not detected the species.

In general and outside of these limited cases, even with field surveys, botanists assess probability of occurrence rather than make a definitive conclusion about species presence or absence. Failure to detect the presence of the species is not definitive, and may be due to variable effects associated with fire, rainfall patterns, and/or season.

Conducting the field surveys in the spring decreased the detection potential for some wildlife species. Therefore, an effort was made to determine presence or absence of potentially suitable habitat for those wildlife species that could not be identified at that time. The field surveys were conducted during the daytime to maximize the detection of most wildlife. Birds represent the largest component of the fauna, and because most birds are active in the daytime, diurnal surveys maximize the number of observations of this portion of the fauna. In contrast, daytime surveys usually result in few observations of mammals, many of which may only be active at night. In addition, many species of reptiles and amphibians are secretive in their habits and are difficult to observe. Many wildlife species are secretive and nocturnal, such as some reptiles, amphibians and small mammals.

Many species of wildlife that could potentially utilize the project site may not have been present because they occur only on a seasonal basis. Many species are nocturnal, move about a territory, or may have become dormant for the season. A two day survey in the spring cannot be used to conclusively determine presence or absence of a species; therefore assessments of presence/absence were made based on the presence suitable habitat to support the species, diagnostic signs (burrows, scat, tracks, vocalizations and nests), known records or occurrence within the area, known distributional and elevational range, and habitat utilization from the relevant literature.

2.2.5.3 Biological Field Survey Results (Vegetation)

To assess the potential impacts of the project action on biological resources, the following assumptions were made:

- Construction activities at each site would be confined to an area approximately 246 ft (75 m) by 164 ft (50 m).
- Construction at each MET monitoring station location will be completed in no more than three days.
- Access to the MET monitoring station location will be accomplished using existing roads and off-road travel from existing roads or OHV trails will be limited to 500 ft (152.4 m and 0.09 miles) or less.
- Construction activities will require minimal or no scraping the ground surface, grading, or vegetation clearing.
- The MET devices will be removed from the project site approximately three years following installation.

2.2.5.3.1 Habitat Observed During the Surveys

Location One: occurs on a low hill and adjacent slopes. Soils are composed of decomposed granite and fines with little organic matter. Boulder outcroppings dot the site. Shrub canopy is estimated at approximately 70%, and the area shows little existing disturbance. There are no trees at or near this site. Some past vegetation clearing has been conducted in this area to approximately 15 ft (4.6 m) either side of McCain Valley Road. Location One included a manzanita that could not be identified at the time of the surveys. This manzanita could be Peninsular manzanita which is a BLM native plant of management concern. This plant is also listed as a CNPS 2.3 plant. 2 plants are ranked by the CNPS as those species that are rare, threatened or endangered in California, but more common outside of the state. The 0.3 designation identifies this plant as not very endangered in California. During the project implementation, this manzanita would be flagged by a biologist and avoided...

Location Two: occurs on a low knoll and adjacent slopes. Soils are composed of decomposed granite and fines with little organic matter. Boulder outcroppings dot the site. Vegetation has been cleared within the last eight months between 15 and 20 ft (4.6 and 6.1 m) from the road edge. Beyond this point, the shrub canopy is estimated at approximately 40%. There are no trees at or near this site. Vegetation in the vicinity is thin and species poor overall, suggesting a history of anthropogenic disturbance.

Location Three: occurs on a ridge line and adjacent slopes. Soils are composed of decomposed granite and fines with little organic matter. Boulder outcroppings dot the site. Shrub canopy is estimated at approximately 55%. There are no trees at or near this site or the site access trail. This area supports a number of OHV trails that show evidence of very regular use. The surrounding vegetation away from the trails is fairly intact, with only moderate levels of disturbance.

2.2.5.3.2 Listed, Candidate and Sensitive Plant Species Having the Potential to Occur within the Project Area

During the surveys, each of the plant species listed above were assessed for their potential to occur within the project area. Plant species determined to have the potential to occur within or project area are presented in Table 7, *Listed and Sensitive Plant Species Having the Potential to Occur within the Project Area*. Table 7 also summarizes conclusions from analysis and field surveys regarding the potential occurrence of listed and sensitive plant species within the project area. The table provides the taxonomic and common names of each potentially occurring species, describes each species' status, describes each species' preferred habitat and general distribution, and analyzes the species' potential to occur within the project area.

During the field surveys, the potential for species listed in Table 7 to occur on the project site was assessed based on the following criteria:

- ***High*:** know occurrence of plant in region documented in California Natural Diversity Database (CNDDB) or other documents in vicinity; suitable habitat and microhabitat conditions are present.

- ***Moderate*:** known occurrence of plant in region documented in CNDDB or other documents in vicinity; suitable habitat conditions are present but suitable microhabitat conditions are not.

- ***Low*:** plant not known to occur in the region on basis of CNDDB or other documents in vicinity; habitat conditions are of poor quality.

- ***None*:** plant not known to occur in the region on basis of CNDDB or other documents in vicinity; suitable habitat conditions is not present in any condition.

Table 4
Listed and Sensitive Plant Species Having the Potential to Occur within the Project Area

Scientific Name	Common Name	Status	General Habitat Description	General Distribution	Potential to Occur in Action Area
Listed Endangered, Threatened, Candidate and State Rare Plants					
Limnanthes gracilis ssp. *parishii*	Parish's meadowfoam	SE, CNPS: 1B.2	Parish's meadowfoam is limited to ephemeral wetlands in the mountains of southern California. It occurs on gentle slopes or in swales, in forest glades, among Mima mounds and in areas likely to be inundated. This species grows in moist habitats such as vernal pools, vernally-wet meadows, springs, seeps, and often on the banks of lakes and streams. Blooming period: Apr - Jun.	This species is endemic to San Diego and Riverside counties. Distribution of Parish's meadowfoam is limited to scattered locations around Cuyamaca Lake and in Cuyamaca Rancho State Park in the Cuyamaca Mountains. Scattered populations occur on the Cleveland National Forest in the Palomar and Laguna Mountain ranges, San Diego County. One population occurs on the Santa Rosa Plateau Preserve southwestern Riverside County. Elevational range: 1,968 – 6,560 ft MSL.	Low.
Sensitive and Locally Important Plants					
Matelea parvifolia	spearleaf	CNPS: 2.3	Found in Mojavean desert scrub, creosote desert scrub, and Sonoran desert scrub on dry, rocky ledges and slopes. Blooming period: Mar - May.	Populations are widely scattered in Mojave Desert and Sonoran Desert of San Bernardino, Riverside and San Diego counties. Elevational range: 1,443 – 3,591 ft MSL.	Moderate.
Geraea viscida	sticky geraea	MC, CNPS: 2.3	Chaparral, often in disturbed areas. Blooming period: May-Jun.	Found in Imperial and San Diego counties and Baja California. Elevational range: 1,476 - 5,576 ft MSL.	High. Occurs in the action area.
Deinandra floribunda	Tecate tarplant (Tecate tarweed)	MC, CNPS: 1B.2	Found on dry slopes and valleys, chaparral, coastal scrub. Often found in little drainages or disturbed areas. Blooming period: Aug – Oct.	Tecate tarplant occurs in San Diego County, California and Baja California. Elevational range: 230 – 4,002 ft MSL.	High. Occurs in the action area.
Hulsea californica	San Diego sunflower	MC, CNPS: 1B.3	Chaparral, upper and lower montane coniferous forest, especially in openings and burned areas. Blooming period: Apr - Jun.	Found in Riverside and San Diego counties. Elevational range: 3,001 – 9,561 ft MSL.	High. Occurs in the action area.

Scientific Name	Common Name	Status	General Habitat Description	General Distribution	Potential to Occur in Action Area
Berberis fremontii	Fremont barberry	CNPS: 3	Rocky areas in chaparral, Joshua tree woodland, and pinyon-juniper woodland. Blooming period: Apr – Jun.	Eastern and Southern Mojave Desert, Peninsular Ranges in San Bernardino and San Diego counties; Arizona; Nevada; Baja California; Sonora in Mexico. Elevational range: 2,755 – 6,068 ft MSL.	High. Occurs near the action area.
Caulanthus simulans	Payson's jewel-flower (Payson's wild cabbage)	MC, CNPS: 4.2	Payson's jewelflower occurs in pinyon-juniper woodland, chaparral and coastal sage scrub, typically on north-facing slopes and ridgelines on sandy-granitic soils. This species frequently occurs on rocky steep slopes, in burned areas or in disturbed sites such as streambeds. Blooming period: Mar - May.	The range of Payson's jewelflower may extend from the Santa Rosa Mountains through central Riverside County to interior San Diego County, primarily along the desert edge. Elevational range: 295 – 7,216 ft MSL.	High. Occurs near the action area.
Streptanthus campestris	southern jewel-flower	MC, CNPS: 1B.3	Grows in open rocky areas of chaparral, lower montane coniferous forests, and pinyon-juniper woodlands. Blooming period: May – Jul.	Found in Riverside, Santa Barbara, San Bernardino, San Diego, and Ventura counties. Elevational range: 2,952 – 7,544 ft MSL.	High. Occurs near the action area.
Arctostaphylos peninsularis ssp. *peninsularis*	Peninsular manzanita	MC, CNPS: 2.3	Grows in chaparral. Blooming period: Apr - May.	Found in northwestern San Diego County and adjacent Riverside County. Elevational range: 4,428 ft MSL.	High. Occurs in action area.
Astragalus douglasii var. *perstrictus*	Jacumba milk-vetch	MC, CNPS: 1B.2	Found on stony hillsides and gravelly or sandy flats in open oak woodland. Also found in chaparral, cismontane woodlands, pinyon and juniper woodlands, riparian scrub, and valley and foothill grasslands. Blooming period: Apr – Jun.	Mountains of interior southeastern San Diego County (Campo to Jacumba and Mountain Springs) and in the eastern Sierra Juarez in Baja California, Mexico. Known from fewer than thirty extant occurrences in southern California. Elevational range: 2,952 – 4,494 ft MSL.	High. Occurs in action area.
Lupinus excubitus var. *medius*	Mountain Springs bush lupine	BLMS, CNPS: 1B.3	Desert washes in creosote bush scrub/Sonoran desert scrub, and found in pinyon and juniper woodlands. Usually found on dry, sandy, gently sloping canyon washes, sandy soil pockets, and flats in steeper slopes and drainages. Blooming period: Mar – May.	Found in SW Imperial County and SE San Diego County and northern Baja California (Mexico). Elevational range: 1,394 – 4,494 ft MSL.	High. Occurs in the action area.
Mentzelia hirsutissima	hairy stickleaf	MC, CNPS: 2.3	Rocky Sonoran desert scrublands. Blooming period: Mar – May.	Found in San Diego and Imperial counties, also Baja Mexico. Elevational range: 0 – 2,296 ft MSL.	Moderate.
Ipomopsis tenuifolia	slender- leaved ipomopsis (slenderleaf skyrocket)	MC, CNPS: 2.3	Chaparral, pinyon-juniper woodland, Sonoran desert scrub on gravelly or rocky substrates. Blooming period: Mar – May.	Found in Imperial and San Diego counties; also Baja California. Elevational range: 328 – 3,936 ft MSL.	Moderate.

Scientific Name	Common Name	Status	General Habitat Description	General Distribution	Potential to Occur in Action Area
Linanthus bellus	desert beauty	MC, CNPS: 2.3	Found on chaparral on sandy soils. Blooming period: Apr – May.	Found in San Diego County. Elevational range: 3,280 – 4,592 ft MSL.	High. Occurs in the action area.
Ayenia compacta	California ayenia	CNPS: 2.3	California ayenia occurs in Mojavean desert scrub and Sonoran desert scrub. Desert canyons and desert arroyos/washes are the preferred habitat of this plant. It is found in the rocky periphery of sandy washes. Blooming period: Mar – Apr.	It is native to the Mojave Desert and Sonoran Desert and surrounding ranges in California, Arizona, and Baja California. Within California, California ayenia is found San Bernardino, Riverside and San Diego counties. Elevational range: 492 – 3,591 ft MSL.	High. Occurs in the action area.

Legend

California State Status
SE = California state endangered: any species, subspecies, or variety of plant or animal that are in serious danger of becoming extinct throughout all, or a significant portion, of their range due to one or more causes, including loss of habitat, change in habitat, overexploitation, predation, competition, or disease.

Bureau of Land Management Status
MC = Bureau of Land Management Native Animal of Management Concern in Habitats Managed by the BLM El Centro Field Office.

BLMS = Bureau of Land Management sensitive are those plant and animal species that are (1) under status review by the USFWS/National Marine Fisheries Service (NMFS); or (2) whose numbers are declining so rapidly that Federal listing my become necessary, or (3) with typically small and widely dispersed populations; or (4) those inhabiting ecological refugia or other specialized or unique habitats." The "Sensitive Species" designation is not meant in include federally listed species, proposed species, candidate species or State listed species, but are designated by the BLM State Director for special management consideration. It is BLM policy to provide sensitive species with the same level of protection that is given federal candidate species.

California Native Plant Society Status
CNPS 1B = California Native Plant Society List 1B plants are native California species, subspecies or varieties that are rare, threatened, or endangered in California and throughout its range.
CNPS 2 = California Native Plant Society List 2 plants are native California species, subspecies or varieties that are rare, threatened or endangered in California, but more common outside of the state.
CNPS 3 = California Native Plant Society List 3 plants are native California species, subspecies or varieties that more information is needed to assign them to one list or another or to reject them.
CNPS 4 = California Native Plant Society List 4 plants are native California species, subspecies or varieties that are of limited distributions or infrequent throughout a broader range of California.

California Native Plant Society Threat Codes
0.1 means it is seriously endangered in California.
0.2 means it is fairly endangered in California.
0.3 means it is not very endangered in California.

2.2.5.3.3 Plants Species Observed During the Field Surveys

The vegetation in the project area is a mixed interior chaparral consisting of scrub oak (*Quercus berberidifolia*), chamise (*Adenostoma fasciculatum*), red shank (*Adenostoma sparsifolium*), sugarbush (*Rhus ovata*), California mountain mahogany (*Cercocarpus betuloides*), holly-leaved cherry (*Prunus ilicifolia*), interior goldenbush (*Ericameria linearifolium*), California buckwheat (*Eriogonum* fasciculatum), and some succulent shrubs. The canopy is rarely continuous due to the course substrate and boulders frequenting the landscape. Perennial and annual forbs occur in varying densities in openings in the shrub canopy. Interior live oak (*Quercus wislizeni*) and coast live oak (*Quercus agrifolia*) trees occur only in larger drainages. True riparian vegetation, including Fremont's cottonwood (*Populus fremontii*) and willow (*Salix* sp.), is extremely rare in the area. Immediately east of the project action area, desert transition scrub vegetation occurs, including various yucca (*Yucca* sp.), cholla (*Opuntia* sp.), boxthorn (*Lycium* sp.), burrobush (*Ambrosia* sp.) and desert apricot (*Prunus fremontii*).

Vegetation surrounding each proposed MET station location consists of interior mixed chaparral with no desert transition vegetation in the immediate vicinity of each site. The chaparral is fairly consistent in composition with scrub oak, California mountain mahogany, sugarbush, and buckwheat dominating the vegetation cover. Among the three proposed locations, Location Two supported a notably less diverse vegetation community. Vegetation at this location was lower and sparser than the other sites, with a notably higher occurrence of coast cholla (*Opuntia prolifera*). Although Location Three is subject to regular and active disturbance from OHV activity, areas a short distance from the trails supported a diverse plant community comparable to the diverse plant community at the relatively pristine Location One.

Plant species observed during the field surveys are common in the surrounding areas. A complete list of plant species observed at each MET monitoring station location site during the field surveys is provided in Table 8, *Plant Species Observed During the Field Surveys*.

Table 5
Plant Species Observed During the Field Surveys

Scientific Name	Common Name	Location One	Location Two	Location Three
Ephedra californica	desert tea	X		X
Rhus ovata	sugarbush	X	X	X
Tauschia arguta	southern tauschia (southern umbrellawort)	X		X
Ericameria linearifolium	interior goldenbush	X	X	X
Plagiobothrys sp.	popcorn flower	X	X	X
Opuntia prolifera	coast cholla	X	X	X
Opuntia oricola	chaparral prickly pear	X	X	X
Arctostaphylos glauca	bigberry manzanita	X		X
Astragalus sp.	locoweed			X
Lotus sp.	lotus	X		X
Lupinus sp.	blue lupine	X		X

Scientific Name	Common Name	Location One	Location Two	Location Three
Quercus berberidifolia	scrub oak	X	X	X
Ribes sp.	chaparral currant	X		
Eriodictyon crassifolium	felt-leaved yerba santa (thickleaf yerba santa)	X		X
Phacelia grandiflora	large-flowered phacelia	X		X
Phacelia tanacetifolia	Tansy phaclia (tansy leafed phacelia)	X	X	X
Salvia columbariae	chia	X		X
Eschscholzia californica	California poppy	X		X
Gilia capitata	globe gilia	X		X
Eriogonum fasciculatum	California buckwheat	X	X	X
Delphinium parryi	blue larkspur	X	X	X
Ceanothus greggii	cupped-leaf ceanothus	X	X	X
Adenostoma fasciculatum	chamise	X	X	X
Adenostoma sparisfolium	red shank (ribbonwood)	X	X	X
Cercocarpus betuloides	California mountain mahogany	X	X	X
Prunus ilicifolia	hollyleaf cherry	X		X
Penstemon centranthifolius	scarlet bugler			X
Penstemon clevelandii	Cleveland's beardtongue	X		
Datura wrightii	sacred datura (false jimson weed)	X		
Solanum xanti	purple nightshade (chaparral nightshade)	X		X
Dichelostemma capitatum	blue dicks (wild hyacinth)	X	X	X
Yucca schidigera	Mojave yucca		X	
Yucca whipplei	our lord's candle (chaparral yucca)	X		X
	unidentified native grasses	X		X

2.2.5.3.4 Potential Effect on Native Vegetation

All habitat types (forms of chaparral and desert transition scrub vegetation) potentially affected by the project action are abundant in the area. The MET devices themselves would have no effect on individual listed or sensitive plants due to the small footprints (39 to 99 square ft [3.6 to 9.2 square m]) of the proposed installation areas and their temporary nature. Ground disturbance will be limited to drilling four small holes for guy wires for a MET tower.

Access to each site will be accomplished by using the best available established roads and trails to each proposed MET monitoring station location, with overland vehicle travel occurring to a maximum of 500 ft (152.4 m and 0.09 miles) only where available OHV trails are absent. The Sodar unit, requiring vehicle transport, will be located as close to existing roads or drivable trails as possible. MET towers can be installed with minimal impact to soils and vegetation in all locations because these units can be transported overland, on-foot where roads or trails are absent.

Impact calculations for overland access (vehicle travel beyond existing roads or OHV trails) for each proposed MET monitoring station location is described below. Impact acreage predicted due to the installation of Sodar units are based on a 10 ft (3.1 m) wide corridor).

Location One: The total distance of the proposed access route from McCain Valley Road to the MET monitoring station location is approximately 688 ft (209.7 m and 0.1 miles); however 400 ft of that is the BLM "non-motorized" trail. It is expected to impact a minimum of 0.07 acres and a potential maximum of 0.16 acres of vegetation.

Location Two: The overland access route from McCain Valley Road to the MET monitoring station location is approximately 793 ft (241.7 m and 0.2 miles) in length and follows what appears to be an existing illegal OHV trail and is expected to impact a maximum of 0.18 acres of vegetation.

Location Three: The maximum overland distance from the end of the existing mapped BLM OHV trail to the MET monitoring station location is approximately 97 ft (29.6 m and 0.02 miles) and is expected to impact a maximum of 0.02 acres of vegetation.

All proposed MET monitoring station location sites have previously been subjected to moderate to high levels of disturbance and the habitats potentially affected in this action area are abundant in the project region. In addition, no special status plant species colonies are known to occur at the proposed MET monitoring station location sites or within the proposed access routes. In all instances, MET device installation and removal activities will avoid ground disturbance and established vegetation wherever possible.

Alternative 1

Under the proposed action,only minimal shrub vegetation will be crushed or removed during overland travel, and all vehicle tracks will be raked out after construction is complete. Because the installation period is very brief and only very localized ground disturbance would result from construction and operation of the MET devices, no substantial adverse effects to adjacent vegetation or special status plant groupings are anticipated.

Alternative 2

The Overland-on-foot access option would require met towers to be delivered to the site on foot reducing the amount of temporary vegetation disturbance.

Alternative 3

Under the no action alternative, the MET towers would not be constructed therefore there would be no impacts to vegetation.

2.2.5.3.5 Invasive Non-Native Plants

Although native vegetation predominates at the three MET monitoring station locations, invasive non-native plants occur at each of the sites. No invasive shrubs or trees were noted at these locations. However, the native plant community is dominated by exotic forbs; specifically annual brome grasses such as ripgut grass (*Bromus diandrus*), red brome (*Bromus madritensis* ssp. *rubens*), cheatgrass (*Bromus tectorum*), and red-stem filaree (*Erodium cicutarium*). These exotics are ubiquitous and form the majority of herbaceous cover at all three locations.

Ground disturbance will be limited to drilling four small holes for guy wires for a MET tower. No access road creation or road improvements are anticipated to occur to access the MET monitoring station location sites. Off road vehicle use could occur, but only if installing the Sodar unit. The two-track-trail will be limited to open areas with little or no shrub cover and to a maximum of 500 ft (152.4 m and 0.09 miles) or less. All vehicle use will utilize existing OHV trails, and where no trails exist, utilize open areas with minimal shrub cover. Each of the MET monitoring station location sites already contains infestations of exotic forbs and the potential for introduction of additional invasive species is minimal. For these reasons, no adverse effects are anticipated from the Proposed Action or alternatives.

2.2.5.4 Biological Field Survey Results (Wildlife)

To assess the potential impacts of the project action on biological resources, the following assumptions were made:

- Construction activities at each site would be confined to an area approximately 246 ft (75 m) by 164 ft (50 m).
- Construction at each MET monitoring station location will be completed in no more than three days.
- Access to the MET monitoring station location will be accomplished using existing roads and off-road travel from existing roads or OHV trails will be limited to 500 ft (152.4 m and 0.09 miles) or less.
- Construction activities will require minimal or no scraping the ground surface, grading, or vegetation clearing.
- The MET devices will be removed from the project site approximately three years following installation.
- Noise and other human activities could result in abandonment of nest sites of special-status species.

2.2.5.4.1 Listed, Candidate and Sensitive Wildlife Species Having the Potential to Occur within the Project Area

During the surveys, each of the wildlife species listed above were assessed for their potential to occur within the project area. Wildlife species determined to have the potential to occur within or project area is presented in Table 9, *Listed and Sensitive Wildlife Species Having the Potential to Occur within the Project Area*. Table 9 also summarizes conclusions from analysis and field surveys regarding the potential occurrence of listed and sensitive wildlife species within the

project area. The table provides the taxonomic and common names of each potentially occurring species, describes each species' status, describes each species' preferred habitat and general distribution, and analyzes the species' potential to occur within the project area.

During the field surveys, the potential for species listed in Table 6 to occur on the project site was assessed based on the following criteria:

- ***High*****:** known occurrence of wildlife in region documented in CNDDB or other documents in vicinity; suitable habitat and microhabitat conditions are present.

- ***Moderate*****:** known occurrence of wildlife in region documented in CNDDB or other documents in vicinity; suitable habitat conditions are present but suitable microhabitat conditions are not.

- ***Low*****:** wildlife not known to occur in the region on basis of CNDDB or other documents in vicinity; habitat conditions are of poor quality.

- ***None*****:** wildlife not known to occur in the region on basis of CNDDB or other documents in vicinity; suitable habitat conditions is not present in any condition.

Table 6
Listed and Sensitive Wildlife Species Having the Potential to Occur within the Project Area

Scientific Name	Common Name	Status	General Habitat Description	General Distribution	Potential For Occurrence
Listed Endangered, Threatened, and Candidate Wildlife					
Insects					
Euphydryas editha quino	quino checkerspot butterfly	FE	Larvae feed upon English plantain woolly/desert plantain, Coulter's snapdragon, Chinese houses, owl's clover. Adult QCB often occur on open or sparsely vegetated rounded hilltops, ridgelines, and occasionally rocky outcrops of chaparral and coastal sage scrub. Associated with sparsely vegetated areas that contain potential host plants and nectar sources, and native plants.	Current populations are known from southern San Diego County and SW Riverside County from sea level to about 3,000 ft MSL in elevation.	Low. Species occurs 6 kilometers southeast, but has not been recorded in the project area.
Amphibians					
Anaxyrus californicus (=*Bufo californicus*)	arroyo toad	FE, SSC	A toad of sandy riverbanks, streams, washes, and arroyos. Breeds in and near streams. It frequents riparian areas, or coast live oaks in valley-foothill and desert riparian as well as a variety of more arid habitats of mixed chaparral and sagebrush. It requires shallow, exposed streamside, quiet water stretches, or overflow pools with silt-free sandy or gravelly bottoms especially favored for breeding. Nearby sandy terraces, dampened in places by capillary action, and with some scattered vegetation providing surface sheltering and burrowing sites and foraging areas.	The arroyo toad is found in the coastal plain, coastal slopes and coastal mountain streams of southern CA west of the desert in southern Monterey County southward through the Transverse and Peninsular ranges. Its known elevational range extended from near sea level to 4,600 ft MSL in CA.	Low. Suitable habitat occurs 6 to 8 kilometers to the east, but does not occur within the project area.
Reptiles					
Coleonyx switaki	barefoot banded gecko (Switak's banded gecko)	ST	Inhabits rocky, boulder-strewn desert foothills, arroyos, and canyons, where it spends most of its life deep in rock crevices and subterranean chambers.	Found among the desert foothills of the Peninsular Ranges in the deserts of eastern San Diego County and western Imperial County at elevations of near sea level to 2,297 ft MSL.	Low. Habitat capable of supporting this species may occur adjacent to, but not within the project area.
Birds					
Buteo swainsoni	Swainson's hawk (nesting)	ST, MC	Require large, open areas with suitable nest trees. Suitable foraging areas include grasslands or lightly grazed pastures and croplands, open deserts, sparse shrub lands. They often nest peripherally to riparian systems of the valley as well as utilizing lone trees or groves of trees adjacent to their hunting areas.	Most nesting is confined to the Central Valley, Klamath Basin and parts of the Great Basin. In southern CA, now mostly limited to spring and fall transient. They are found from sea level to about 7,100 ft in elevation.	Low. Rare in San Diego County.

Scientific Name	Common Name	Status	General Habitat Description	General Distribution	Potential For Occurrence
Empidonax traillii extimus	southwestern willow flycatcher (nesting)	FE, SE	Birds typically arrive in southern CA at the end of April and adults depart from the breeding territory in mid-August. Restricted to riparian woodlands along streams, rivers, wetlands and marshes with mature, dense stands of willows, cottonwoods, or smaller spring fed or boggy areas with willows or alders. Nesting willow flycatchers invariably prefer areas with surface water nearby.	It occurs from near sea level to over 8,500 ft MSL, but is primarily found in lower elevation riparian habitat in southern CA. Breeds in CA from the Mexican border north to Independence in the Owens Valley.	Low. No suitable wetland habitat in or adjacent to the action area.
Vireo bellii pusillus	least Bell's vireo (nesting)	FE, SE	Primarily occupy riparian habitats with dense cover within 1-2 m of the ground and a dense, stratified canopy. It uses habitat which is limited to the immediate vicinity of water courses 2,000 ft elevation in the interior.	Except for a few outlying pairs, the subspecies is currently restricted to southern CA south of the Tehachapi Mountains, along the coast and the western edge of the Mojave Desert to NW Baja CA below 2,000 ft in elevation.	Low. No suitable wetland habitat in or adjacent to the action area.
Mammals					
Ovis canadensis nelsoni DPS	Peninsular bighorn sheep (Distinct Population Segment)	FE, ST, MC, Fully Protected	They inhabit desert mountains. These are arid, rocky, sparsely vegetated lands. They graze along open slopes, washes and alluvial fans. They avoid higher elevations, likely because of decreased visibility associated with denser vegetation. Optimal habitat includes steep walled canyons and ridges bisected by rocky or sandy washes, with available water.	Restricted to the east facing, lower elevation slopes (typically below 4,600 ft MSL) of the Peninsular Ranges in southern CA along the NW edge of the Sonoran Desert to north-central Baja, CA, Mexico. They are found in the In-Ko-Pah of San Diego and Imperial counties. Also found in Anza-Borrego Desert State Park.	Moderate. Suitable habitat occurs directly east of the project area.
Sensitive and Locally Important Wildlife					
Reptiles					
Phrynosoma coronatum (*blainvillii* population)	coast (San Diego) horned lizard	SSC	Found in a wide variety of vegetation types including coastal sage scrub, annual grassland, chaparral, oak woodland, riparian woodland and coniferous forest. The key elements of such habitats are loose, fine soils with a high sand fraction; an abundance of native ants or other insects; and open areas with limited overstory for basking and low, but relatively dense shrubs for refuge.	It ranges from the Transverse Ranges southward to the Mexican border west of the deserts, and on scattered sites along the extreme western desert slope of the Peninsular Ranges. The known elevation range of this species is from 32 – 6,990 ft MSL.	High. Species occurs on-site in suitable habitat adjacent to MET sites one and three.
Aspidoscelis tigris stejnegeri (=*Cnemidophorus tigris stejnegeri*)	coastal whiptail (coastal western whiptail)	ND	Found in hot and dry open areas with sparse foliage such as deserts, chaparral and semiarid. Also found in woodland and riparian areas. Can be found in open, often rocky areas with little vegetation or sunny microhabitats within shrub or grassland associations. The ground may be firm soil, sandy, or rocky.	This subspecies is found in coastal Southern CA, mostly west of the Peninsular Ranges and south of the Transverse Ranges, and north into Ventura County. Ranges south into Baja CA.	Moderate.

Scientific Name	Common Name	Status	General Habitat Description	General Distribution	Potential For Occurrence
Charina trivirgata (=*Lichanura trivirgata*)	rosy boa	ND	In coastal areas it inhabits rocky chaparral-covered hillsides and canyons. They prefer habitats with a mix of brushy cover and rocky soil such as coastal canyons and hillsides, desert canyons, washes and mountains. They do not require permanent water. They have been found under rocks, in boulder piles and along rock outcrops and vertical canyon walls.	The rosy boa is widely, but sparsely distributed in desert and chaparral habitats throughout southern CA, south of Los Angeles, from the coast to the Mojave and Colorado deserts.	Moderate.
Crotalus ruber ruber	northern red-diamond rattlesnake	SSC	Found from the desert, through dense chaparral to inland mesas and valleys, all the way to the cool ocean shore. Associated with heavy brush with large rocks or boulders. Dense chaparral in the foothills, cactus or boulder associated coastal sage scrub, oak and pine woodlands, and desert slope scrub.	San Bernardino County southward on both coastal and desert sides of the Peninsular Ranges to Mexico. Its known elevational range extends from near sea level to about 5,000 ft MSL.	Moderate. Habitat capable of supporting this species may occur on-site.
Birds					
Aquila chrysaetos	golden eagle (nesting and wintering)	Fully Protected, WL, MC	Within southern CA, the species favors grasslands, brushlands, deserts, oak savannas, open coniferous forests, and montane valleys. Uses rolling foothills and mountain terrain, wide arid plateaus deeply cut by streams and canyons, open mountain slopes, and cliffs and rock outcrops. Nesting is primarily restricted to rugged, mountainous country. Cliff-walled canyons provide nesting habitat also, large trees in open areas.	Uncommon permanent resident and migrant throughout CA, except center of Central Valley. It ranges from sea level up to 11,500 ft MSL. Perhaps more common in southern CA than in north.	Moderate. Breeding territories are known to occur in the vicinity.
Falco mexicanus	prairie falcon (nesting)	WL	Habitat use of the prairie falcon includes annual grasslands to alpine meadows, perennial grasslands, savannahs, rangeland, some agricultural fields, desert scrub areas and even marshland and ocean shores. Requires sheltered cliff ledges for cover and nesting.	Ranges from SE deserts NW along the inner Coast Ranges and Sierra Nevada. The elevation of their habitat includes open habitat up to 10,988 ft MSL.	High. Recorded in the project vicinity.
Athene cunicularia	burrowing owl (burrow sites and some wintering sites)	SSC, BLMS, MC	Occurs in shortgrass prairies, grasslands, lowland scrub, agricultural lands, rangelands, prairies, coastal dunes, desert floors, and some artificial, open areas as a year-long resident. They require large open expanses of sparsely vegetated areas on gently rolling or level terrain with an abundance of active small mammal burrows.	It is a resident in the open areas of the lowlands over much of the southern CA region. Found as high as 5,300 ft MSL in Lassen County.	Low. Found in San Diego County, but no suitable open habitat occurs on-site.

Scientific Name	Common Name	Status	General Habitat Description	General Distribution	Potential For Occurrence
Vireo vicinior	gray vireo (nesting)	SSC, BLMS, MC	An uncommon, local, summer resident in arid, shrub-covered slopes in pinyon-juniper, juniper, and chamise-redshank chaparral habitats on foothills and mesas. In its preferred habitat it is found in areas with sparse to moderate cover and scattered small trees. While junipers are the dominant tree in gray vireo habitat, oaks may also be common. They forage, nest, and sing in areas formed by a continuous growth of twigs, 1-5 ft above ground.	The gray vireo is a summer resident in the mountains of the eastern Mojave Desert and in the Transverse Ranges and Peninsular Ranges. Known in Campo in San Diego County. Altitudes of nesting localities ranged from 2,000 to 6,500 ft.	High. Suitable habitat occurs on site. Nesting sites have been documented nearby.
Agelaius tricolor	tricolored blackbird (nesting colony)	SSC, BLMS	Breeds near fresh water, preferably in emergent wetland with tall, dense cattails or tules, but also in thickets of willow, blackberry, wild rose, tall herbs and forages in grassland and cropland habitats. Require nearby water, a suitable nesting substrate, and open-range foraging habitat of natural grassland, woodland, or agricultural cropland.	It breeds lwest of the Cascade Range, Sierra Nevada, and SE deserts from Humboldt County south to extreme SW San Bernardino County, western Riverside County and western and southern San Diego County.	Low. No suitable wetland habitat in or adjacent to the action area.
Mammals					
Chaetodipus californicus femoralis	Dulzura pocket mouse	SSC	Found in a variety of habitats including coastal scrub, chaparral and grassland. They prefer dense patches of chaparral with only small openings, though the edges between shrubs and open areas with sparse herbaceous plants show high use.	Found in the coastal terrace and hills from San Diego County southward to Baja CA.	High. Occurs within the action area.
Neotoma lepida intermedia	San Diego desert woodrat	SSC	Found in a variety of shrub and desert habitats primarily associated with rock outcroppings, boulders, cacti, or areas of dense undergrowth. Commonly inhabit mixed chaparral, coastal sage scrub, and desert habitats. Associated with large cactus patches, rocky outcroppings and boulder-covered hillsides.	Occurs from San Luis Obispo County south through the Transverse and Peninsular Ranges into Baja CA. It elevational range is from sea level to 8,500 ft MSL.	High. Occurs within 1 kilometer of the project area.
Onychomys torridus ramona	southern grasshopper mouse	SSC	Found in scrub habitats with friable soils for digging. Also found in grasslands and sparse coastal sage scrub habitats.	Restricted to coastal southern CA.	High. Occurs within the action area.
Lepus californicus bennettii	San Diego black-tailed jackrabbit	SSC	Found in open areas in grasslands, agricultural fields or sparse coastal scrub. They have also been found in annual grassland, Riversidean sage scrub, alluvial fan sage scrub, Great Basin sagebrush, chaparral, disturbed habitat. They are not found in high mountain forests. It prefers valley bottoms or intermontane valleys.	West of the deserts from the Mexican border north to northern Santa Barbara County. Marginal records from Pasadena, Mt. Pinos, and Jacumba.	High. Suitable habitat is present in the action area. Occurs within 5 kilometers of the project area.

Scientific Name	Common Name	Status	General Habitat Description	General Distribution	Potential For Occurrence
Macrotus californicus	California leaf-nosed bat	SSC, BLMS	Habitats occupied include desert riparian, desert wash, desert scrub, desert succulent shrub, alkali desert scrub, and palm oasis. Needs rocky, rugged terrain with mines or caves for roosting. Night roosts may be in buildings, mines, bridges, rock shelters, or other sites with overhead protection.	Found from Riverside, Imperial, San Diego, and San Bernardino counties south to the Mexican border. CA records are below 2,000 ft.	Moderate. No suitable hibemacula within 200 meters of the action area.
Eumops perotis californicus	western mastiff bat (western bonneted bat)	SSC, BLMS, MC	Found in semi-arid to arid habitats, including conifer and deciduous woodlands, coastal scrub, annual and perennial grasslands, chaparral, desert scrub, and urban. A cliff dwelling species and found in crevices in large boulders and buildings. Western mastiff bats prefer deep crevices that are at least 15 or 20 ft above the ground.	Found in southern CA coastal basins. Uncommon resident in SE San Joaquin Valley and Coastal Ranges from Monterey County southward through southern CA, from the coast eastward to the Mojave and Colorado Deserts.	Moderate. No suitable hibemacula within 200 meters of the action area.
Nyctinomops femorosaccus	pocketed free-tailed bat	SSC, MC	Habitats used include pinyon-juniper woodlands, desert scrub, desert succulent shrub, desert riparian, desert wash, alkali desert scrub, Joshua tree, chaparral, and palm oasis. They are found in rocky, desert areas with relatively high cliffs, not far from riparian areas. It is a crevice dwelling species, usually associated with high cliffs and rugged rock outcroppings. Colonies can be located in caves, rock crevices in cliff faces or human-made structure.	Could be expected anywhere in southern CA south of the San Bernardino Mountains. Found in San Diego County: Borrego Palm Canyon, vicinity of Suncrest, Anza Borrego State Park, Split Mountain, and Borrego Valley.	Moderate. No suitable hibemacula within 200 meters of the action area.
Corynorhinus townsendii	Townsend's big-eared bat	SSC, BLMS, MC	Found in a variety of communities, including coastal conifer and broad-leaf forests, oak and conifer woodlands, arid grasslands and deserts, and high-elevation forests and meadows. Requires caves, mines, tunnels, buildings, or other human-made structures for roosting. They only roosts in the open, hanging from walls and ceilings.	Found throughout CA.	Low. No suitable hibemacula within 200 meters of the action area.
Antrozous pallidus	pallid bat	SSC, BLMS, MC	Found in deserts, grasslands, shrublands, woodlands, and forests. They are most common in deserts, preferring areas of open, dry habitats, with rocky areas for roosting and water nearby. Pallid bats day roosts in deep rock crevices, tree hollows, mines, caves, and a variety of man-made structures.	A locally common species of low elevations in CA. Local data suggest that this species may be most common at elevations below 6,000 ft MSL on both coastal and desert sides.	Moderate. No suitable hibemacula within 200 meters of the action area.

Scientific Name	Common Name	Status	General Habitat Description	General Distribution	Potential For Occurrence
Myotis ciliolabrum	western small-footed myotis (small-footed bat)	BLMS, MC	This bat occupies daytime roosts in rocky habitats such as badlands, cliffs and talus slopes. This bat refers rocky or grassland regions especially riverbanks, ridges and outcroppings with abundant rocks for roosting. In summer, this bat roosts in trees, under loose bark, in buildings or in rock crevices. It hibernates in caves or mines in winter, from November to March.	Common bat of arid uplands in CA. In coastal CA it occurs from Contra Costa County south to the Mexican border. This species is found from sea level to at least 8,900 ft MSL.	Moderate. No suitable hibemacula within 200 meters of the action area.
Myotis evotis	long-eared myotis (long-eared bat)	BLMS, MC	This bat occurs in forested areas adjacent to rocky outcrops or open habitats. It occasionally occupies buildings, mines and caves. Both sexes of this mainly solitary bat hibernate in caves and mines in winter. In spring, groups of up to 30 females gather in nursery colonies in tree cavities, under loose bark, in old buildings, under bridges or in loose roof shingles. Males typically roost in caves and mines in summer.	Widespread in CA. Occurring along the entire coast. This species has been found in nearly all brush, woodland, and forest habitats, from sea level to at least 9,000 ft MSL.	Moderate. No suitable hibemacula within 200 meters of the action area.
Myotis yumanensis	Yuma myotis (Yuma bat)	BLMS, MC	Optimal habitats are open forests and woodlands with sources of water over which to feed. It is common in wooded canyon bottoms. The Yuma myotis roosts in buildings, mines, caves, or crevices.	Common and widespread in CA. Found in a wide variety of habitats ranging from sea level to 11,000 ft MSL, but it is uncommon to rare above 8,000 ft MSL.	Moderate. No suitable hibemacula within 200 meters of the action area.

Legend

Federal Status

FE = federally endangered: any species, subspecies, or variety of plant or animal that is in danger of extinction throughout all or a significant portion of their range. Species become officially listed as endangered and receive explicit protection under the Federal Endangered Species Act (ESA) upon publication of final rule for listing in the Federal Register.

California State Status

SE = California state endangered: any species, subspecies, or variety of plant or animal that are in serious danger of becoming extinct throughout all, or a significant portion, of their range due to one or more causes, including loss of habitat, change in habitat, overexploitation, predation, competition, or disease.

ST = California state threatened: any species, subspecies, or variety of plant or animal that, although not presently threatened with extinction, is likely to become an endangered species in the foreseeable future in the absence of special protection and management efforts.

SSC = species of special concern status applies to animals not listed under the federal Endangered Species Act or the California Endangered Species Act, but which nonetheless 1) are declining at a rate that could result in listing, or 2) historically occurred in low numbers and known threats to their persistence currently exist. The CDFG has designated certain vertebrate species as “Species of Special Concern” because declining population levels, limited ranges, and/or continuing threats have made them vulnerable to extinction. The goal of designating species as “Species of Special Concern” is to halt or reverse their decline by calling attention to their plight and addressing the issues of concern early enough to secure their long term viability. Not all “Species of Special Concern” have declined equally; some species may be just starting to decline, while others may have already reached the point where they meet the criteria for listing as a “Threatened” or “Endangered” species under the State and/or Federal Endangered Species Acts.

Scientific Name	Common Name	Status	General Habitat Description	General Distribution	Potential For Occurrence

fully protected: animal species may not be taken or possessed at any time and no licenses or permits may be issued for their take except for collecting these species for necessary scientific research and relocation of the bird species for the protection of livestock. Fish and Game Code.

WL = CDFG watch list. This list includes taxa that are not on the current special concern list that (1) formerly were on the prioritized 1978 or unprioritized 1992 special concern lists and are not currently listed as state threatened and endangered, (2) have been removed (delisted) from either the state or federal threatened and endangered lists (and remain on neither), or (3) are currently designated as "fully protected" in California.

Bureau of Land Management Status

BLMS = Bureau of Land Management sensitive are those plant and animal species that are (1) under status review by the USFWS/National Marine Fisheries Service (NMFS); or (2) whose numbers are declining so rapidly that Federal listing my become necessary, or (3) with typically small and widely dispersed populations; or (4) those inhabiting ecological refugia or other specialized or unique habitats." The "Sensitive Species" designation is not meant in include federally listed species, proposed species, candidate species or State listed species, but are designated by the BLM State Director for special management consideration. It is BLM policy to provide sensitive species with the same level of protection that is given federal candidate species.

MC = Bureau of Land Management Native Animal of Management Concern in Habitats Managed by the BLM El Centro Field Office.

Other

ND = no designation

2.2.5.4.2 Wildlife Observed During the Field Surveys

The mixed interior chaparral habitat occurring within the project action area is known to support both breeding and foraging territory for a wide variety of wildlife, including large and small mammals, birds, reptiles and insects. Open water is a key limiting factor within the immediate vicinity of each MET monitoring station location site; however, wildlife does have access to water sources from residential and agricultural activities in the area. In addition, natural perennial springs can be found within canyons immediately east of the project area.

Location One: occurs on a low hill in mixed chaparral with some large boulders. No trees or suitable nesting substrates for special-status raptors were found, and no active nests were noted on large boulders and rock outcroppings. No suitable crevices for bat roosts were detected. The location does offer nesting sites for shrub and ground nesting birds. A wood rat midden was located approximately 100 ft (30.5 m) south of Location One. The site also showed evidence of small burrows suitable for rodents and reptiles. Tracks of unknown mammals and reptiles were evident throughout the site.

Location Two: occurs on a low knoll in mixed chaparral with some large boulders. No trees or suitable nesting substrates for special-status raptors were found, and no active nests were noted on large boulders and rock outcroppings. No suitable crevices for bat roosts were detected. The location does offer nesting sites for shrub and ground nesting birds. The site also showed evidence of small burrows suitable for rodents and reptiles. Tracks of unknown mammals and reptiles were evident throughout the site.

Location Three: occurs on a ridge line and adjacent slopes in mixed chaparral with some large boulders. No trees or suitable nesting substrates for special-status raptors were found, and no active nests were noted on large boulders and rock outcroppings. No suitable crevices for bat roosts were detected. The location does offer nesting sites for shrub and ground nesting birds. A wood rat midden was located approximately 150 ft (45.7 m) southeast of Location Three. The site also showed evidence of small burrows suitable for rodents and reptiles. Tracks of unknown mammals and reptiles were evident throughout the site.

In the Tule Wind Resource Area 2007-2008 Avian Surveys report (Tetra Tech 2009), a total of 80 identified avian species and 12 unidentified species groups, consisting of 3,851 birds were observed within the project area. Raptor nests were mapped and studied during these surveys; however no active raptor nests were located within 0.5 mile (0.8 km) of the proposed MET monitoring station locations.

Wildlife species observed during the field surveys are common in the surrounding areas. A complete list of wildlife species observed at each MET monitoring station location site during the field surveys is provided in Table 10, Wildlife *Species Observed During the Field Surveys*.

Table 7
Wildlife Species Observed During the Field Surveys

Scientific Name	Common Name	Location One	Location Two	Location Three
Invertebrates				
Papilio eurymedon	pale swallowtail butterfly	X		X
Danuas sp.	monarch/queen butterfly	X		
Atalopedes sp.	common skipper	X		
Atalopedes sp	duskywing skipper		X	X
Apodemia mormo virgulti	Behr's metalmark butterfly		X	X
Reptiles				
Phrynosoma blainvillii (coronatum)	coast (San Diego) horned lizard	X		X
	unknown lizard	X	X	X
	unknown snake	X	X	
Crotalus viridis	western rattlesnake			X
Birds				
Callipepla californica	California quail	X	X	X
Cathartes aura	turkey vulture	X		
Buteo jamaicensis	red-tailed hawk			X
Calypte anna	Anna's hummingbird	X		
Lanius ludovicianus	loggerhead shrike	X		
Aphelocoma californica	western scrub-jay	X	X	X
Corvus corax	common raven	X		X
Psaltriparus minimus	Bushtit	X	X	X
Dendroica sp.	unknown warbler	X		X
Pipilo maculatus	spotted towhee			X
Mammals				
Spermophilus beecheyi	California ground squirrel			X
Lepus californicus	black-tailed jackrabbit	X	X	X
Odocoileus hemionus	mule deer			X

Quino checkerspot butterfly is federally listed as endangered and occurs in chaparral and coastal sage scrub vegetation in San Diego County. The species is known to occur in similar habitat near Jacumba, just south of the Interstate 8 and the project area. Despite the proximity of known populations of this species, the CNDDB (CDFG 2008b) has no records of quino checkerspot butterfly occurring within the project area, and this species has never been recorded in the McCain Valley. In addition, the proposed MET device locations lack suitable host plant species and typical soils for quino checkerspot butterfly (Dudek 2008).

Quino checkerspot butterfly occurs only in a few areas of San Diego and Riverside counties where the following essential larval host plants occur: dot-seed plantain (*Plantago erecta*), wooly plantain (*Plantago patagonica*), white snapdragon (*Antirrhinum coulterianum*), thread-

leaved bird's beak (*Cordylanthus rigidus*), and owl's clover (*Castilleja exserta*). Larval host plants are often restricted to clay soils. Quino checkerspot butterfly abundance varies markedly from year to year. In dry years, no mature butterflies may be observed and larvae may remain in a hibernating state (USFWS 2008b). The species is known to occur in similar habitat near Jacumba, just south of the Interstate 8 and the project area. However, the CNDDB (CDFG 2008b) has no records of quino checkerspot butterfly occurring within the project area, and this species has never been recorded in the McCain Valley. The following summarizes recent studies to determine likely presence of quino checkerspot butterfly within McCain Valley and its vicinity.

The 2005 year was a favorable "wet year" that supported the proliferation of quino checkerspot butterfly host plants. In this year the BLM sponsored a report assessing habitat suitability for quino checkerspot butterfly within their eastern San Diego County planning region and the project area. This study did not find any quino checkerspot butterfly, but found three quino checkerspot butterfly host plants: dot-seed plantain, wooly plantain, and owl's clover within the study area, but only one, wooly plantain in eastern McCain Valley. The study also found that atypical landscapes and (granitic) soils were supporting plantago patches (BLM 2005).

Also in 2005, Ken Osborne of Osborne Biological Consultants surveyed portions of McCain Valley for quino checkerspot butterfly (Osborne 2005). This study did not find quino checkerspot butterfly, but found both wooly plantain and white snapdragon host plants. Mr. Osborne concluded that the central and southeast portions of the project area do constitute quino checkerspot butterfly habitat according to USFWS protocol, however, there was a very low probability of quino checkerspot butterfly occurring within the project area.

The 2006 year was an exceptionally dry year that was unfavorable to the proliferation of quino checkerspot butterfly or their host plants. In this year the BLM commissioned two studies: one by Osborne Biological Consultants (Osborne 2006) and the second by Tierra Environmental Services (Tierra 2006). Neither study found any adult quino checkerspot butterfly or host plants. However, both studies concluded that the results were inconclusive due to the poor environmental conditions resulting from drought.

The 2008 year constituted a fairly normal year for precipitation where quino checkerspot butterfly were recorded at many other sites in San Diego County. In this year Dudek & Associates conducted a Habitat Assessment for Quino Checkerspot Butterfly in the McCain Valley (Dudek 2008). This study concluded that the project area provided suitable vegetation and potential nectaring sources for quino checkerspot butterfly. However, a lack of crucial host plants, and the clay soils typically associated with quino checkerspot butterfly host plants, suggest that this area has a low potential to support quino checkerspot butterfly.

In conclusion, although known reference populations of quino checkerspot butterfly occur within a few miles of McCain Valley and support relatively similar habitat conditions, this species has never been recorded in the McCain Valley despite extensive attempts to locate it. Therefore, because all three proposed MET monitoring station location sites are to be located within an area with no record of quino checkerspot butterfly and the minimal surface disturbance, no affects to quino checkerspot butterfly are anticipated. In addition, implementation of the project

alternatives (bringing towers in by foot, or the no action alternative) will have no impacts to the quino checkerspot butterfly.

Arroyo toad may occur in eastern San Diego County in intermittent stream drainages with sand or gravel and associated pools. However, this species has never been recorded beyond Kitchen Creek, approximately 5 miles (8.1 km) west of the project action area. This species' occurrence at Kitchen Creek in the coastal draining Tijuana River watershed is due to the intermittent nature of streams in that area. The project area falls into a rain shadow region with lower precipitation that makes the drainages in McCain Valley ephemeral and thus not suitable habitat for arroyo toad (Zeiner 2004, Merkel 2008). Therefore, no impacts to arroyo toad are anticipated from either the project action or the project alternatives (bringing towers in by foot, or the no action alternative).

Barefoot banded gecko is known to occur in only a few locations in eastern San Diego County and western Imperial County, on rocky slopes and among boulders in steep canyons of the desert transition habitat and foothills (Zeiner 2004). This species is extremely difficult to detect because it is a largely nocturnal species spending much of its time concealed in rock crevices (CDFG 2009). The few rock outcrops that occur in the vicinity of the three MET monitoring station location sites are relatively small and isolated, surrounded by dense chaparral vegetation, and occur on hills and low ridge lines, not among steep canyons. These habitat characteristics are atypical of barefoot banded gecko habitat and it is unlikely that barefoot banded geckos occur in rock outcroppings on site. In addition, project construction activities would last a few days at most and would occur during the day when barefoot banded geckos are inactive. Project activities would not affect any features of barefoot banded gecko habitat. Therefore, no impacts to barefoot banded geckos are anticipated from either the project action or the project alternatives (bringing towers in by foot, or the no action alternative).

Coast (San Diego) horned lizard occur in openings in chaparral and coastal sage scrub vegetation with open patches of bare, sandy or friable ground often near roads and trails with frequent disturbance. The CNDDB lists several records for the action area (CDFG 2008b) and this species was found at Location One and Location Three. Although the proposed MET device(s) will be placed in coast (San Diego) horned lizard habitat, the project action will disturb a very limited surface area of 39 to 99 square ft (3.6 to 9.2 square m), and create very little disturbance to adjacent habitat and vegetation. In addition, the fact that coast (San Diego) horned lizard commonly occur within OHV trail and similar actively disturbed areas suggests that the minor additional disturbance associated with MET device installation and operation would have little or no impact on this species. In addition, implementation of the project alternatives (alternative bringing towers in by foot, or the no action alternative) will have little or no impact on this species.

Southwestern willow flycatcher and **least Bell's vireo** may potentially occur within eastern San Diego County and the surrounding project area. However, both species require riparian woodland or riparian scrub habitats for breeding and foraging that are extremely rare in the project area. McCain Valley and Lark Canyon do support seasonal stream courses; however, the MET monitoring station locations are situated on ridges, far from these stream corridors. In addition, the only true riparian vegetation located within the vicinity of the proposed MET

monitoring station locations consists of a 500 ft (152.4 m and 0.09 miles) long grove at the Cottonwood Campground and recreation area, 0.87 mile (1.4 km) south of Location One. This very small patch of riparian scrub vegetation is unlikely to support southwestern willow flycatcher or least Bell's vireo due to its small size and its isolation from other patches of similar habitat. Therefore, no impacts to southwestern willow flycatchers or least Bell's vireos are anticipated from either the project action or the project alternatives (bringing towers in by foot, or the no action alternative).

Golden eagles require steep canyon or cliff habitat for nesting, but forage over a wide area away from these locations and in a wide variety of habitats (SDNHM 2004). Suitable nesting sites are very limited in the general area, but nesting territories and foraging eagles are known to occur in the project area. The proposed MET station locations are generally unsuitable roosting habitat due to the current lack of perching structures. Therefore, no impacts to golden eagles are anticipated from either the project action or the project alternatives (bringing towers in by foot, or the no action alternative).

Burrowing owls are found in open grasslands, open shrublands or desert scrub habitat. The proposed MET monitoring station locations are in chaparral shrublands that are not typical habitat suitable for burrowing owl. Although this species has the potential to occur in the project vicinity, the substantial shrub cover adjacent to each of the proposed MET monitoring station locations are unsuitable for burrowing owl nesting or foraging and this species is not expected to occur. Therefore, no impacts to burrowing owl are anticipated from either the project action or the project alternatives (bringing towers in by foot, or the no action alternative).

Gray vireos are known to forage and nest within the immediate area surrounding McCain Valley. This species frequents mixed chaparral and nests in dense stands where its nests can be found 1.67 to 10 ft (.5 to 3.1 m) above ground. Although the project action will occur in gray vireo habitat with known populations, the activity will occur in a very limited area and create very little disturbance to adjacent vegetation. In addition, the installations will occur outside of the breeding season for this species and is unlikely to affect any nesting birds. Therefore, no impacts to grey vireos are anticipated from either the project action or the project alternatives (bringing towers in by foot, or the no action alternative).

Peninsular bighorn sheep USFWS designated critical habitat for this species occurs within 1,400 ft (.3 miles) east of proposed MET Location Two, in the In-Ko-Pah and Jacumba Mountains. However, the habitat range of Peninsular bighorn sheep is restricted by the density of vegetation cover and steepness of slopes on site. Specifically, the sheep will only venture where vegetation is very sparse and open, allowing clear sight lines of potential predators and where escape routes on steep, open slopes are nearby (personal communication: J. Irwin, BLM Biologist) (USFWS 2008a). All three of the proposed MET monitoring station location sites are located in areas with moderate slope, in chaparral vegetation with shrub cover between 5 and 10 ft (1.5 and 3.1 m), and vegetation densities unsuitable for Peninsular bighorn sheep. Therefore, no impacts to Peninsular bighorn sheep are anticipated from either the project action or the project alternatives (bringing towers in by foot, or the no action alternative).

2.2.5.5 Biological Resource Protection Measures

This section describes the vegetation and wildlife avoidance and protection measures that will be utilized during project implementation, to the extent practical.

- Prior to project implementation, the biologist will conduct educational and awareness training about the biological resources present at the project locations and within the project area.

- The biologist will flag and delineate the proposed overland route from the existing road or trail to the proposed MET station location. Contractors will follow only this route to enter and leave the project location.

- While flagging the overland route to the proposed MET station location, the biologist will conduct a pre-installation survey. This will help to determine if there are sensitive biological resources present that may be harmed by project implementation.

- The contractors will define and respect clear work area limits.

- To the extent practical, the contractors will preserve existing vegetation. All work performed as the result of project activities will try to avoid all trees and vegetation within the project area.

- Precautions will be taken to avoid damage to vegetation by people or equipment.

- If an overland two-track-trail is created to install/uninstall the Met towers and Sodar unit, the contractor will rake out their tracks so as not to draw attention to the route and create an illegal trail. They will also try to cover and hide the route with any vegetation that was knocked over by the vehicle and trailer towing the Sodar unit.

- To prevent the introduction of new invasive weedy plant species into the project area, IBR will require the designated contractor to ensure that vehicles and equipment that have been used on sites outside of the project area have been cleaned prior to starting work on the project.

- Highly visible balls, flagging or other comparable and effective marking device will be placed on the guy wires to avoid or reduce avian collisions.

- The contractors will not disturb, capture, handle, or move animals, or their nests/burrows.

- If any wildlife is encountered during the course of project activities, said wildlife will be allowed to freely leave the area unharmed.

- To avoid impacts to wildlife, the contractor will institute a litter control program during the course of the construction activities. Litter will not be left on the project site. Litter will be properly disposed of at that end of the day.

- Pets will be prohibited on the job site.
- Contractors will be prohibited from collecting plants and wildlife.
- If requested by the BLM, IBR will have a biological monitor on site during ground disturbing activities.

2.2.6 Cultural Resources

Defined here, cultural resources are sites, structures, landscapes, and objects of some importance to a culture or community for scientific, traditional, religious, or other reasons. Cultural Resources and Native American Relations Concerns are the two critical elements of the human environment analyzed in this section.

2.2.6.1 Methods

This analysis was conducted in compliance with National Environmental Policy Act (NEPA) and with Section 106 of the National Historic Preservation Act (NHPA) of 1966 and its implementing regulations (36 CFR Part 800, as amended in 1999). Section 106 requires federal agencies, or those they fund or permit to implement a project, to consider the effects of their actions on historic properties and provide the Advisory Council on Historic Preservation a reasonable opportunity to comment on such undertakings. To determine whether an undertaking could affect historic properties, it is standard practice to conduct a cultural resource inventory and evaluate identified resources against criteria for the National Register of Historic Places (NRHP).

According to Section 106 of the NHPA, "an undertaking has an effect on a historic property when the undertaking may alter characteristics of the property that may qualify the property for inclusion in the National Register" (36 CFR Part 800.9[a]). An effect is considered adverse when the effect on an NRHP-eligible property may diminish the integrity of the property's location, design, setting, materials, workmanship, feeling, or association. Adverse effects on historic properties include, but are not limited to, the following listed below.

- Physical destruction or alteration of all or part of the property.
- Isolation of the property from or alteration of, the property's setting when that character contributes to the property's qualifications for listing in the NRHP.
- Introduction of visible, audible, or atmospheric elements that are out of character with the property or that alter its setting.
- Neglect of a property, resulting in its deterioration or destruction.
- Transfer, lease, or sale of the property (36 CFR 800.9).

For the purposes of evaluating potential impacts, the APE for the MET devices would be the disturbance area of up to110 ft (33.5 m).

The 2007 State Protocol Agreement between the California State Director of the BLM and the California State Historic Preservation Officer (SHPO) defines the roles and relationships

between the SHPO's offices and the BLM and provides BLM with an alternative procedure for meeting its responsibilities under NHPA Section 106. The State protocol is intended to insure that the California BLM operates efficiently and effectively in accordance with the intent and requirements of the NHPA. The protocol streamlines the NHPA Section 106 process by not requiring case by case consultation with the SHPO on most individual undertakings.

2.2.6.2 Pre-Field Research

A literature and records search of the cultural resources site and project file collection was conducted at the South Coastal Information Center of the California Historical Resources Information System, at San Diego State University, San Diego, California.

The search focused specifically on lands comprising the entire proposed IBR ROW, including the much more limited location of the project action and adjacent areas out to a distance of 1 mile (1.6 km) from the edges of the proposed ROW. As part of this search, the California Points of Historical Interest, the California Historical Landmarks, the California Register of Historic Places, the NRHP, the California Historic Resources Inventory, and historic maps were reviewed for the project. Research of historic literature, maps, and relative information was also conducted at the California State Library in Sacramento.

The search revealed over 30 previous archaeological investigations within 1 mile (1.6 km) of the entire proposed IBR ROW boundary. Overall, 163 archaeological sites and 23 isolates were identified within the entire IBR ROW and 1 mile (1.6 km) buffer study area. The search identified 40 previously recorded archaeological sites within the entire proposed IBR ROW Boundary.

For the project action: there are 9 sites within 1 mile (1.6 km) of Location One, 3 sites within 1 mile (1.6 km) of Location Two, and 14 sites within 1 mile (1.6 km) of Location Three. Previous investigations and previously recorded site descriptions are provided in the tables below: Table 11, *Previous Cultural Resource Investigations and Studies within 1 Mile of the MET Monitoring Station Locations*; Table 12, *Previously Recorded Cultural Resources within 1 Mile of Location One APE (No Archaeological Sites are Located within Location One APE)*; Table 13, *Previously Recorded Cultural Resources within 1 Mile of Location Two APE (No Archaeological Sites are Located within the Location Two APE)*; Table 14, *Previously Recorded Cultural Resources within 1 Mile of Location Three APE (No Archaeological Sites are Located within the Location Three APE)*. No previously recorded archaeological sites were identified within any of the MET/Sodar unit locations' APE. The APE for the MET devices would be the disturbance area of 39 square feet, and the APE for Location 2, with both a MET and Sodar unit, would be 99 square feet.

Table 8
Previous Cultural Resource Investigations and Studies within 1 Mile of the MET Monitoring Station Locations

IC NADB Report Number	Report Title	Survey Type/Acreage	Within or Crosses Proposed ROW	Author	Date
1120275	Three Proposed Spring Improvements, McCain Valley, San Diego County. Bureau of Land Management. Submitted to Bureau of Land Management. Unpublished Report on file at South Coastal Information Center, San Diego State University, San Diego, CA 92182.	Archaeological Identification Study	Location One	BLM	1978
1125214	Cultural Resource Report: Lark Canyon Motorcycle Trails & Trail Location. Welch, Patrick. Submitted to California Desert District. Unpublished Report on file at South Coastal Information Center, San Diego State University.	Cultural Resource Management Plan	Location Three	Welch, P.	1982
1128711	An Archaeological Survey for the Proposed Emergency Access Trail Big Country Ranch. Brian F. Smith and Associates. Submitted to U.S. Department of the Interior. Unpublished Report on file at South Coastal Information Center, San Diego State University.	Archaeological Survey, overview, and assessment	Location Two	Buysse, J.	2002
1129764	An Archaeological Survey for the Proposed Emergency Access Trail, Big County Ranch, County of San Diego, California. Brian F. Smith and Associates. Submitted to U.S. Department of the Interior. Unpublished Report on file at: South Coastal Information Center, San Diego State University.	Archaeological Survey	Location Two	Buysse, J.	2002
1130689	Lark Canyon Motorcycle Trails and Trails Locations. Bureau of Land Management Submitted to: Unpublished Report on file at South Coastal Information Center, San Diego State University.	Archeological Overview and Assessment Archeological Evaluation Study	Location Three	Welch, P.	1982

Table 9
Previously Recorded Cultural Resources within 1 Mile of Location One APE
(No Archaeological Sites are Located within Location One APE)

Site Number	Resource Description	Period/Era	Recorder and date	CRHP/NRHP Eligible	Distance from Location One APE
CA-SDI-1151	Bedrock milling features.	Prehistoric	ASM Affiliates 8/2008 (update), originally recorded by McKinney 1969.	not evaluated	within 1 mile
CA-SDI-4139	Lithic and ceramic scatter.	Prehistoric	ASM Affiliates 8/2008	not evaluated	within 1 mile
CA-SDI-6887	Lithic scatter and milling station.	Prehistoric	Christenson 1979	not evaluated	within 1 mile
CA-SDI-8706	Lithic and ceramic scatter.	Prehistoric	Cable 1981	not evaluated	within 1 mile
CA-SDI-15746	Lithic scatter.	Prehistoric	ASM Affiliates 8/2006	not evaluated	within 1 mile
CA-SDI-17119	Ceramic scatter.	Prehistoric/late	ASM Affiliates 8/2006	not evaluated	within 1 mile
CA-SDI-18046	Bedrock milling features, ceramic, and lithic core.	Prehistoric/late	ASM Affiliates 8/2006	not evaluated	within 1 mile
CA-SDI-18055	Bedrock milling feature and lithic and ceramic scatter.	Prehistoric/late	ASM Affiliates 8/2006	not evaluated	within 1 mile
CA-SDI-18575	Spring with bedrock mortars, ceramic and lithic scatter.	Prehistoric/late	n/a	not evaluated	within 1 mile

Table 10
Previously Recorded Cultural Resources within 1 Mile of Location Two APE
(No Archaeological Sites are Located within the Location Two APE)

Site Number	Resource Description	Period/Era	Recorder and date	CRHP/NRHP Eligible	Distance from Location Two APE
CA-SDI-4005	Milling station, rock shelter, lithic and ceramic scatter. During an attempt to relocate the site in 2006, the rock shelter was observed, but no associated artifacts were identified.	Prehistoric	ASM Affiliates 8/2006, update (originally recorded in 1975).	not evaluated	within 1 mile
CA-SDI-7156	Three rock shelters, bedrock milling features, lithic and ceramic scatter, and cremation.	Prehistoric	Underwood 1979.	not evaluated	within 1 mile
CA-SDI-18054	Ceramic scatter.	Prehistoric	ASM Affiliates 8/2006.	not evaluated	within 1 mile

Table 11
Previously Recorded Cultural Resources within 1 Mile of Location Three APE
(No Archaeological Sites are Located within the Location Three APE)

Site Number	Resource Description	Period/Era	Recorder and date	CRHP/NRHP Eligible	Distance from Location Three APE
CA-SDI-4010	Habitation site with multiple cremations.	Prehistoric	McCown 1975 (update ASM 2006)	not evaluated, potentially eligible	within 1 mile
CA-SDI-7152	Lithic and ceramic scatter.	Prehistoric	Johnson 1979	not evaluated	within 1 mile
CA-SDI-7154	Lithic and ceramic scatter.	Prehistoric	Dominici 1975	not evaluated	within 1 mile
CA-SDI-9225	Rock shelter, lithic and ceramic scatter.	Prehistoric	Welch 1982	not evaluated	within 1 mile
CA-SDI-9226	Lithic and ceramic scatter.	Prehistoric	Welch 1982	not evaluated	within 1 mile
CA-SDI-9227	Lithic and ceramic scatter.	Prehistoric	Welch 1981 (update ASM 2005)	not evaluated	within 1 mile
CA-SDI-9229	Lithic and ceramic scatter.	Prehistoric	Welch 1982	not evaluated	within 1 mile
CA-SDI-10330	Lithic and ceramic scatter.	Prehistoric	Dominici 1979	not evaluated	within 1 mile
CA-SDI-17813	Temporary camp with lithics and ceramics, and cremation remains.	Prehistoric	ASM Affiliates 4/2006	not evaluated, potentially eligible	within 1 mile
CA-SDI-17814	Lithic and ceramic scatter.	Prehistoric	ASM Affiliates 4/2006	not evaluated	within 1 mile
CA-SDI-17815	Lithic scatter.	Prehistoric	ASM Affiliates 4/2006	not evaluated	within 1 mile
CA-SDI-17817	Seasonal camp, lithic and ceramic scatter. Site in poor condition due to construction of campground facilities and recreationalist.	Prehistoric	ASM Affiliates 1/2006	not evaluated	within 1 mile
CA-SDI-17829	Lithic scatter.	Prehistoric	ASM Affiliates 4/2006	not evaluated	within 1 mile
CA-SDI-17830	Lithic scatter and ceramic scatter.	Prehistoric	ASM Affiliates 12/2005	not evaluated	within 1 mile

2.2.6.3 Tribal, Individuals, Organizations or Agencies Consulted

To solicit additional knowledge about cultural resources, the Native American Heritage Commission (NAHC) was contacted requesting a Sacred Lands file search and local tribal contact list on June 30, 2008. The NAHC responded by a faxed letter on July 3, 2008, indicating that a search of the Sacred Lands file, "failed to indicate the presence of Native American cultural resources in the MET project area." The search did identify cultural resources within the immediate IBR ROW project area. The letter included a list of Native American individuals and organizations that may have knowledge of resources in the area. The BLM sent letters to these individuals and organizations on December 19, 2008 as part of the government to government consultation for the project. The letters notified the tribes of the project action, requested information regarding knowledge of potential cultural resources in the area, and solicited comments regarding the project.

Table 15, *Native American Contacts for IBR* lists the tribal representatives that were contacted by the BLM. Letters were sent to notify the tribes of the project action, to invite comments pertaining solely to MET devices, and obtain any additional knowledge of resources in the project area. To date, the BLM has received three responses regarding the project, but has not as yet received any specific tribal concerns regarding this project. See Appendix C, *Native American Consultation Letters*.

Table 12
Native American Contacts for IBR

Campo Kumeyaay Nation Ms. Monique LaChappa, Chairperson 36190 Church Road, Suite 1 Campo, CA 91906 cc. Ms. Lisa Gover, EPA Director	**Santa Ysabel Band of Diegueno Indians** Mr. Johnny Hernandez, Chariman P.O. Box 130 Santa Ysabel, CA 92070 cc. Mr. Clint Linton
Ewiiaapaayp Band of Kumeyaay Indians Mr. Robert Pinto, Sr., Chairman/EPA D PO Box 2250 Alpine, CA 91903-2250 cc. Mr. Michael Garcia, Vice Chairman Mr. Willie Micklin, Executive Director	**Inaja-Cosmit Band of Mission Indians** Ms. Rebecca Osuna, Chariperson 309 S. Maple Street Escondido, CA 92025
La Posta Band of Mission Indians Ms. Gwendolyn Parada, Chairperson PO Box 1120 Boulevard, CA 91905	**Kwaaymii Laguna Band of Mission Indians** Ms,Carmen Lucas PO Box 775 Pine Valley, CA 91962
Manzanita Band of Kumeyaay Nation Mr. Leroy J. Elliott, Chairperson PO Box 1302 Boulevard, CA 91905 cc. Mr. Nick Elliot, EPA Director	**Viejas Band of Kumeyaay Indians** P.O. Box 908 Alpine, CA 91903-0908 cc. Ms. Lisa Haws, Land Use Manager

2.2.6.4 Archaeological Field Survey Methods

A qualified archeologist conducted a Class III cultural resources inventory of the proposed MET monitoring station locations on April 29th and 30th, 2009. For the purpose of this assessment, the APE is a 110 ft (33.5 m) radius area at each MET monitoring station location. The survey area included the proposed APE and a buffer at each location to a total of a 328 ft (100 m) radius for each site. The field survey was conducted within a radius of approximately 328 ft (100 m) of each MET monitoring station location. The APE for the proposed access routes for accessing each MET monitoring station location site consisted of 15 ft (4.6 m) on either side of a center line, or a 30 ft (9.1 m) corridor.

Location One: from McCain Valley Road the proposed access route to Location One will follow an existing BLM "non-motorized" trail (Route ID #63) for approximately 400 ft (121.9 m and 0.08 miles) and then continue overland to the proposed MET monitoring station location for a distance of approximately 288 ft (87.8 m and 0.05 miles). The total distance of the proposed access route from McCain Valley Road to the MET monitoring station location is approximately 688 ft (209.7 m and 0.1 miles); however 400 ft of that is the BLM "non-motorized" trail. This proposed access route was surveyed for cultural resources. Approximately 8.2 acres were surveyed at Location One for cultural resources.

Location Two: The overland access route from McCain Valley Road to the MET monitoring station location is approximately 793 ft (241.7 m and 0.2 miles) in length and follows an existing illegal OHV trail. Recent tracks were noted. This proposed access route was surveyed for cultural resources. Approximately 8.24 acres was surveyed at Location Two for cultural resources.

Location Three: vehicle access to Location Three will occur on mapped BLM OHV routes where possible, and on established, but unmapped OHV trails where mapped routes are impassable by a vehicle and trailer. From McCain Valley Road, the route of travel to Location Three will include Route ID #320/328 to Route ID #313 to Route ID #312 to Route ID #311 to Route ID #305. The approximate distance of this proposed access route on existing roads/trails is 6,223 ft (1,896.8 m and 1.2 miles). Location Three will be accessed overland from the existing BLM "Ridge Trail" (Route ID # 305) OHV route (for motorcycles and all terrain vehicles only) to the proposed MET monitoring station location for a distance of approximately 97 ft (29.6 m and 0.02 miles). The total distance of the proposed access route from McCain Valley Road to the MET monitoring station location is approximately 6,320 ft (1,926.3 m and 1.2 miles). This proposed access route was surveyed for cultural resources. Approximately 12.18 acres was surveyed at Location Three for cultural resources.

The survey effort included an intensive pedestrian survey within the APE of each MET monitoring station location within the project area. This survey covered a total of approximately 28.62 acres for the entire proposed project.

2.2.6.5 Survey Results

The Class III cultural resource inventory was conducted for the entire project APE, plus a buffer, to determine the presence or absence of cultural resources (historic properties). Each proposed

MET monitoring station location and associated access route was intensively surveyed by a qualified archaeologist. One prehistoric archaeological site was identified near one of the MET monitoring station locations. This site is situated in relation to the project APE such that it can be protected and project impacts can be avoided during project implementation. No historic properties were identified within the APE of the other two MET monitoring station location sites or proposed access routes.

Alternative 1

Under the proposed action, the three METs and one Sodar unit will be installed as outlined above in Section 1.3. Provided that the standard resource protection measures outlined in the next section (2.2.6.6) are adhered to, the implementation of the MET/Sodar testing phase of Tule Wind project would have no adverse effect on cultural resources listed on or eligible for nomination to the NRHP.

Alternative 2

Under Alternative 2, the three METs and one Sodar unit would be installed using pedestrian access at locations 1 and 3, and using motor vehicles at location 2. This would result in less ground disturbance along access routes. Provided that the standard resource protection measures outlined in the next section (2.2.6.6) are adhered to, the implementation of the MET/Sodar testing phase of Tule Wind project would have no adverse effect on cultural resources listed on or eligible for nomination to the NRHP.

Alternative 3

Under the No Action alternative, no METs or Sodar units would be installed. Therefore, there would be no ground disturbance and no impact to cultural resources, and no cultural resource protection measures would be needed.

2.2.6.6 Cultural Resource Protection Measures

This section describes the cultural avoidance and protection measures that will be utilized during project implementation under either Alternative 1 or Alternative 2.

- Prior to project implementation, all non-archaeological project personnel will be briefed by a trained archaeologist on the importance of, and the legal basis for, the protection of significant archaeological resources. Personnel will be given a training brochure regarding identification of cultural resources and reporting finds.

- If the construction staff or others observe previously unidentified archaeological resources during construction, they should halt work in the vicinity of the find(s) and immediately notify the Project Archaeologist and BLM El Centro Field Office Archaeologist, so that the resource value may be documented and assessed as soon as possible. The finds will be formally recorded and evaluated. The proponent should protect the cultural resource discovery from further disturbance pending evaluation.

- If human remains and/or cultural items defined by the Native American Graves Protection and Repatriation Act (NAGPRA) are inadvertently discovered during construction activities, all work in the vicinity of the find will cease and the San Diego County Coroner and the BLM Field Office Archaeologist will be contacted immediately pursuant to Section (3)(d)(1) of the Act. If the remains are found to be Native American as defined by NAGPRA, work may be delayed in the vicinity of the find up to 30 days.

- The archeologist will flag and delineate the proposed overland route from the existing road or trail to the proposed MET station location. Contractors will follow only this route to enter and leave the project location.

- All work regarding the installation and removal of the MET and Sodar units will be monitored by a qualified archaeologist. This includes any reclamation of overland access routes.

- The contractors will define and respect clear work area limits.

- If an overland two-track-trail is created to install/uninstall the Met towers and Sodar unit, the contractor will rake out their tracks so as not to draw attention to the route and create an illegal trail. They will also try to cover and hide the route with the vegetation that was knocked over by the vehicle and trailer towing the Sodar unit.

- The contractors will not disturb, handle, move or collect cultural resources.

- If requested by the BLM or interested Native American Tribes, a Native American Consultant will be on site during ground disturbing activities.

3.0 Cumulative Impacts

A cumulative impact consists of an impact which is created as a result of the combination of the project action evaluated together with other projects (current projects and future projects) in the area causing related impacts. The following critical elements are not present within the project action area: prime or unique farmlands, wild and scenic rivers, wilderness areas, ACECs, wastes (hazardous or solid), floodplains, wetlands/riparian zones, water quality (surface and ground), energy, and environmental justice. Therefore, implementation of the project action would have no cumulative impact on these elements. However, there are critical elements that are present within the project action area. The project action could have a potential cumulative impact on these elements. These elements are discussed below.

3.1 Uses or Resources Present that May be Affected

This section discusses the cumulative effects to certain critical elements that may occur as a result of the combination of the proposed project action and other projects in the area. The analysis of effects of the project action identified minimal cumulative impacts to the following resources.

3.1.1 Wildlife Management Areas

Installation of the MET devices is expected to remain consistent with the allowable management uses within the McCain Valley National Cooperative Land and Wildlife Management Area. Therefore, implementation of the project action would have a negligible effect on wildlife management areas. Cumulative impacts to wildlife management areas are not anticipated from implementation of the project action and other projects within the area.

3.1.2 Recreation

The project action will occur near, but create no obstruction or limitation to the use of existing OHV trail or staging areas, campsites, hiking or biking trails, or wildlife viewing in the area. None of the proposed MET devices would be located within a designated campground area or scenic overlook. Location Three is located within an OHV use area, but would not interfere with access or use of any existing OHV trails. The proposed MET device would not be sited immediately adjacent to hiking or biking trails. Construction and operation of the MET towers would also incorporate safety features such as colored guy wire covers to ensure that collisions do not occur between recreationists and the wires. The guy wires will not affect the trail. In addition, MET device installation will not have a substantial adverse affect on OHV, biking, or hiking activities because of the MET devices' relatively small footprint on the existing environment. However, there is a potential to create illegal trails with the overland route used to install/uninstall the MET towers and the Sodar unit. If an overland two-track-trail is created to install/uninstall the MET tower and the Sodar unit, the contractor will rake out their tracks so as not to draw attention to the route and create an illegal trail. They will also try to cover and hide the route with any vegetation that was knocked over by the vehicle and trailer towing the Sodar

unit. It is anticipated that the proposed recreation protection measures would help to avoid or minimize potential impacts to recreation.

The MET devices and other projects in the area could have a cumulative impact on recreational resources for the project area. The presence of the three additional MET devices could affect the recreational experience of some users in McCain Valley however the impacts would be negligible. It is anticipated that construction and operation of the project would not be cumulatively significant and the project action would not result in cumulative impacts to recreation.

3.1.3 Air Quality

Implementation of the project action would generate temporary air quality impacts with the low level emissions of reactive organic gases, nitrogen oxides, and PM_{10} dust by gasoline and diesel fuel combustion during the operation of vehicles on exposed soils. However, these emissions would be restricted to the one to two-day period for each of the three MET device installation and dismantling. Total pollutants emitted by construction activities would be considerably below the federal conformity significance thresholds. The Sodar unit and MET tower will not have emissions during the one-to-three years of operation. Operation of the project during the one to three year time period would not result in impacts to air quality other than the occasional fugitive dust and emissions from vehicles during infrequent MET device maintenance, if it needed to occur. The vehicles would use McCain Valley Road and other motorized roads. When near the MET monitoring station location, the vehicles would park once the route becomes impassable. Foot crews would walk through the vegetation to the MET monitoring station location to perform maintenance. However, vehicles might need to drive overland to MET station location to conduct maintenance/repairs or address vandalism on the MET devices. This impact to air quality will be temporary. Impacts to air quality also come from other vehicle emissions from OHV and other recreationists in the area. Implementation of the project action is expected to have a negligible effect on regional air quality and have no effect on San Diego County air quality attainment levels.

Cumulative air quality impacts could occur if construction/development activities for other projects were to occur at the same time and within the same local air basin as the project. It is anticipated that construction and operation emissions would not be cumulatively significant and the project action would not result in cumulative impacts to air quality.

3.1.4 Visual Resources

The project action would have no effect on California scenic highways or result in substantial damage to scenic resources, such as trees, rock outcroppings, or historic resources along a designated state scenic highway. In addition, it will not introduce a source of light or glare that adversely affects day or nighttime views in the area.

Additional analysis is guided by the BLM VRM system protocols mentioned earlier in this report (BLM 2009). VRM Class 4 governs the project action area and allows for ‘management activities that require major modification of the existing character of the landscape’. The

location of the project action will occur in VRM Class 4 areas where the installation of MET devices is an allowable management activity. Implementation of the project would result in a temporary impact to visual resources. Although two MET devices already exist within the IBR ROW, the MET devices proposed for all locations would be visible from McCain Valley Road and other vantage points within the project area. The MET devices would introduce a new visual element to the landscape in three new locations. Impacts would be more noticeable in areas where there are currently no existing MET devices and where the MET device is located closer to McCain Valley Road.

Cumulative visual impacts would occur where the new MET devices would be viewed in combination with other projects in the area, such as the completed wind energy generating facility (consisting of 25 wind turbines) at the Manzanita Indian Reservation to the west of the ROW. However, these potential impacts would be offset by the temporary nature of this installation and the distance of these devices from sensitive receptors. It is anticipated that the proposed visual protection measures would help to avoid or minimize potential impacts to visual resources. These include applying a camouflage paint treatment to the Sodar unit and micro-siting among concealing vegetation and topography to minimize impacts to visual resources. Due to the colorful safety features required for the MET towers, no concealing treatments can be employed for these devices.

3.1.5 Biological Resources

Implementation of the project action and other projects in the area could result in cumulative impacts to biological resources. Potential impacts include loss and disturbance to vegetation and habitat; and loss and disturbance to special status plant and wildlife species.

Other projects would potentially affect a variety of sensitive habitats. All together, these projects would have considerable impacts to sensitive biological resources. It is anticipated that the proposed biological protection measures would help to avoid or minimize potential impacts to biological resources. These include placing highly visible balls, flagging or other comparable and effective marking devices on the guy wires to avoid or reduce avian collisions and other protection measures.

3.1.6 Cultural Resources

Implementation of the project action and other projects in the area could result in cumulative impacts to cultural resources. Any loss of cultural resources from implementation of the project action and any other projects would have a cumulative impact to cultural resources. Existing activities in the project vicinity include recreational use of the open routes of travel, specified OHV areas, and the use of the existing McCain Valley Road and Interstate 8. The acreage of the proposed action is small and would not combine with existing impacts to create a cumulatively adverse impact to cultural resources, including visual resources. In addition, implementation of the cultural resource protection measures for this project would help mitigate potential impacts to cultural resources.

4.0 References

ASP (Atmospheric Systems Corp.) 2009.
Sodar Unit Product Models. Retrieved May 5, 2009 at: http://minisodar.com/index.php?option=com_easygallery&act=categories&cid=6&Itemid=6.

BLM (Bureau of Land Management). 2005.
Quino Checkerspot Butterfly Habitat Assessment for BLM Lands Managed by the El Centro Field Office. El Centro, CA.

————————. 2008.
Eastern San Diego County Resource Management Plan, Visual Resources. Available at: www.blm.gov/ca/st/en/fo/elcentro/esdrmp/htm

————————. 2009.
Eastern San Diego Resource Management Plan (RMP) Recreation Resources Map. Retrieved May 6, 2009. Available at: www.blm.gov/ca/st/en/fo/elcentro/esdrmp.html

CDFG (California Department of Fish & Game). 2008a.
California Natural Diversity Database, Special Animal List. February 2008 Version. California Department of Fish and Game, Sacramento, California. Available at: http://www.dfg.ca.gov/biogeodata/cnddb/pdfs/ SPAnimals.pdf. (Accessed 4 November 2008).

————————. 2008b.
California Natural Diversity Database (CNDDB) Rare Find 3, Version 3.1.1, December 4, 2008. Available http://www.dfg.ca.gov/biogeodata/cnddb/.

————————. 2009.
Life History of the Barefoot Banded Gecko. Available at: www.nrm.dfg.ca.gov/FileHandler.ashx?DocumentVersionID=17517

CEC (California Energy Commission). 2008.
State of California Energy Action Plan. Available at: http://www.energy.ca.gov/energy-action_plan/index.html.

CNPS (California Native Plant Society). 2001.
Inventory of rare and endangered plants of California (sixth edition). Rare Plant Scientific Advisory Committee, David P Tibor, Convening Editor. Sacramento, CA

County of San Diego. 2008.
County of San Diego Air Pollution Control District, retrieved July 20, 2008 at: www.sdapcg.org/what/whatnew/html.

DOE (Department of Energy). 2009.
Wind Energy Technologies Program. Available at: http://www1.eere.energy.gov/windandhydro/.

Dudek (Dudek & Associates). 2008.
Quino Checkerspot Butterfly Habitat Assessment for the Tule Wind Project. Dudek & Associates, Encinitas, CA.

Federal Register. 2008.
Vol. 73, No. 145 / Monday, July 28, 2008 / Notices.

Hickman, J. C. (ed). 1993.
The Jepson Manual; Higher Plants of California Berkeley, CA: University of California Press.

Iberdrola (Iberdrola Renewables, Inc.). 2009.
2007-2008 Avian Surveys for the Tule Wind Resource Area, San Diego County, CA. February.

Irwin, J. 2008.
BLM, El Centro Office. Personal communication with staff biologist regarding the known habitat requirements of Peninsular bighorn sheep. August.

Jennings, M.R. and M.P. Hayes. 1994.
Amphibian and reptile species of special concern in California Final Report Rancho Cordova, CA: California Department of Fish and Game, Inland Fisheries Division.

Merkel, Ed. 2008.
Personal Correspondence with Ed Irvine of Merkel & Associates, San Diego, CA

NRG (NRG Systems Inc.). 2009.
Atmospheric Instruments Product List. Access May 6, 2009 at: http://www.nrgsystems.com/store/product_detail.php?cd=13&s=3973.

Osborne (Osborne Biological Consultants). 2005.
Habitat Evaluations for Quino Checkerspot Butterfly on 8 Linear Miles of Wind Turbine Array Sites, San Diego County. Unpublished letter report for Tetra Tech EC, Inc., Osborne Biological Consultants, Riverside, CA.

———————. 2006.
Focused Adult Survey for Quino Checkerspot Butterfly (*Euphydryas editha quino*) on Approximately 19 Square Kilometers of Bureau of Land Management Lands in the Table Mountain Area, San Diego County, California. Osborne Biological Consultants, Riverside, CA

Renisen, I. V. 1978.
Bird species of special concern in California, an annotated list of declining or vulnerable bird species. (Wildlife Management Branch Administrative Report No 78-1) Sacramento, CA: California Department of Fish and Game, Non-Game Wildlife Investigations

San Diego Natural History Museum (SDNHM). 2004.
San Diego County Bird Atlas, Available at: http:llwww.sdnhrn oxg/research!birdatlas/wrendexings/.

Schad, J. 1998.
A foot and A field in San Diego County, Wilderness Press, Berkeley, CA.

Tetra Tech (Tetra Tech EC, Inc.). 2009.
2007-2008 Avian Survey. Tule Wind Resource Area, San Diego County, California. February.

Tierra Environmental Services. 2006.
Focused Survey for the Quino Checkerspot Butterfly, Lark Canyon Study Site. Tierra Environmental Services, San Diego, CA.

USFWS (U. S. Fish and Wildlife Service). 2008a.
Recovery plan for bighorn sheep in the Peninsular Ranges, California, Portland, OR. retrieved on July 31, 2008, at http://ecos.fws.gov/speciesProfile/SpeciesReport.do?spcode=A0DR.

———————. 2008b.
Quino Checkerspot Butterfly Protocol and Monitoring Information. Retrieved on July 31, 2008 from: http://www.fws.gov/carlsbad/Quino_Monitor.htm.

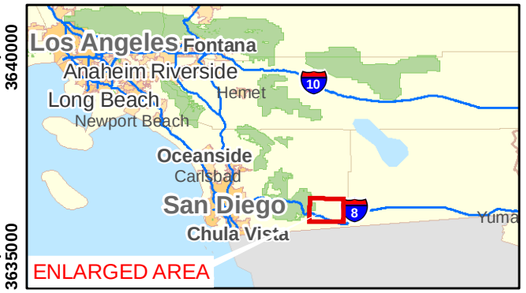
Williams, D. F. 1986.
Mammalian species of special concern in California (Wildlife Management Division Administrative Report 86-1.) Sacramento, CA: California Department of Fish and Game, Wildlife Management Division.

Zeiner, D. C., W. Fraudenslayex, Jr., and K. Mayer. 2004.
1988 California's Wildlife. Volume 1: Amphibians and reptiles California statewide wildlife habitat relationships system. Sacramento, CA: California Department of Fish and Game. Environmental Analysis. July.

FIGURES

IBERDROLA RENEWABLES

TULE WIND METEOROLOGICAL TOWER INSTALLATION PROJECT SAN DIEGO COUNTY, CALIFORNIA



Legend

- Project Site (18.8 sq.mi./12,054 ac.)
- Proposed MET Station Location
- Existing MET Station Location
- Town
- Interstate
- Highway
- Roads
- McCain Valley Access Road
- BLM Wilderness Study Area (WSA)
- BLM Wilderness Area
- CA Dept of Fish and Game
- CA Dept of Parks and Recreation
- Department of Defense
- US Forest Service
- Waterbody

N

0 1 2 3 4

Miles

Notes:
(a) UTM Zone 11, NAD 1983 Projection.
(b) Source data: ESRI, BLM,TTEC

FIGURE 1
PROJECT VICINITY MAP

TETRA TECH EC, INC.

Printing Date: 11/11/2009 2:45 PM
File: P:\GIS\Projects\Iberdrola\Maps\Tule\Tule-VicinityMap.mxd

561400 561600 561800 562000 562200

3631000 3630800 3630600 3630400

McGain Valley Road

Route ID #51

Route ID #63

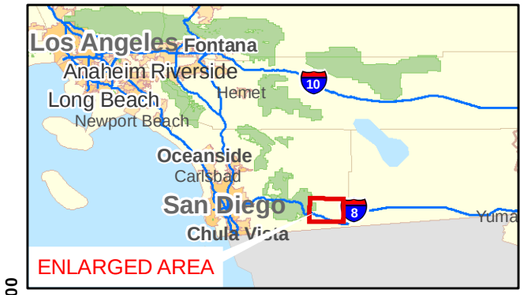
Location 1
3630706 N
561803 E

3630717 N
561718 E

3630670 N
561613 E

Motorized Vehicle
Turnaround / Parking

TULE WIND METEOROLOGICAL TOWER INSTALLATION PROJECT SAN DIEGO COUNTY, CALIFORNIA



Legend

- Proposed MET Station Location
- Access Road Navigation Waypoint
- Proposed Access Route on Existing Road/Trail (400 ft)
- Proposed Access Route off Existing Road/Trail (288 ft)

BLM Route of Travel (ROT) Designation

- Motorized
- Non-Motorized

N

0 125 250 500
Feet

Notes:
(a) UTM Zone 11, NAD 1983 Projection.
(b) Source data: ESRI, BLM, TTEC
(c) USGS 7.5 Minute Quadrangle: Sombrero Peak

FIGURE 2
PROPOSED ACCESS TO LOCATION 1

TETRA TECH EC, INC.

Printing Date: 11/11/2009 1:59 PM
File: P:\GIS\Projects\Iberdrola\Maps\Tule\Tule-MetTower1-Route.mxd

566400 566600 566800 567000 567200

3626800 3626600 3626400 3626200

Location 2
3524465 N
536675 E

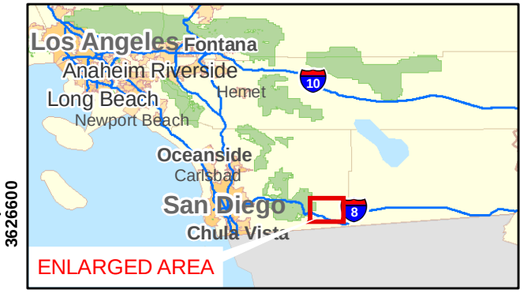
Route ID #51

3626273 N
566634 E

McCain Valley Road

IBERDROLA RENEWABLES

TULE WIND METEOROLOGICAL TOWER INSTALLATION PROJECT SAN DIEGO COUNTY, CALIFORNIA



Legend

- Proposed MET Station Location
- Access Road Navigation Waypoint
- Proposed Access Route off Existing Road/Trail (793 ft)

BLM Route of Travel (ROT) Designation

- Motorized
- Non-Motorized

N

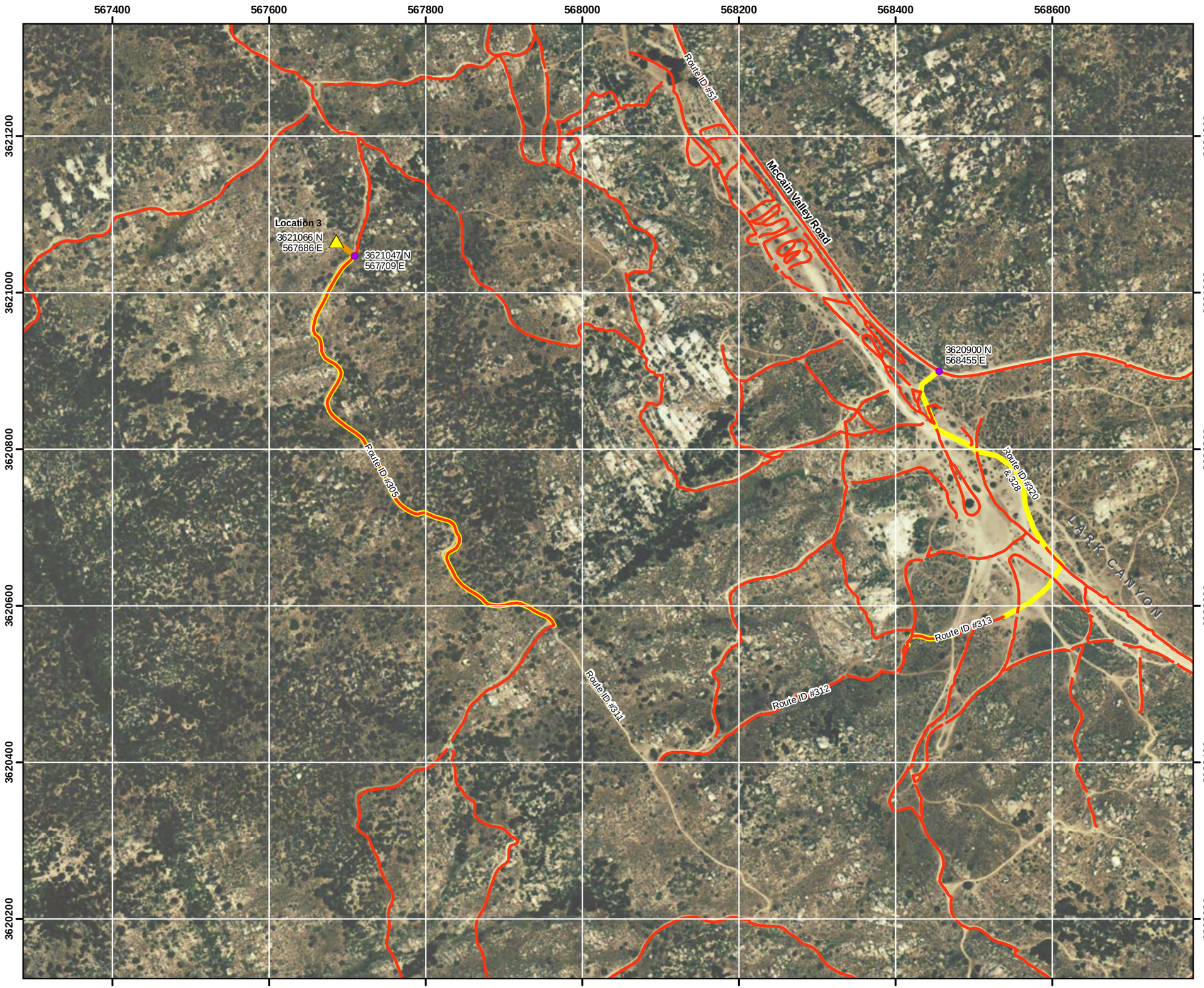
0 125 250 500
Feet

Notes:
(a) UTM Zone 11, NAD 1983 Projection.
(b) Source data: ESRI, BLM, TTEC
(c) USGS 7.5 Minute Quadrangle: Sombrero Peak

FIGURE 3
PROPOSED ACCESS TO LOCATION 2

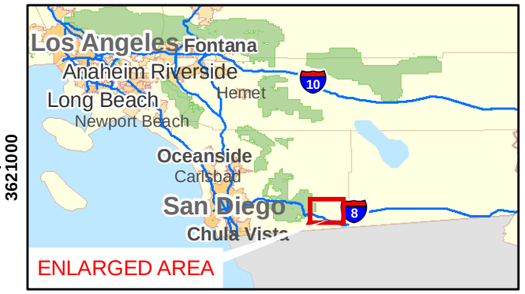
TETRA TECH EC, INC.

Printing Date: 11/11/2009 9:13 AM
File: P:\GIS\Projects\Iberdrola\Maps\Tule\Tule-MetTower2-Route.mxd



IBERDROLA RENEWABLES

TULE WIND METEOROLOGICAL TOWER INSTALLATION PROJECT SAN DIEGO COUNTY, CALIFORNIA



Legend

- Proposed MET Station Location
- Access Road Navigation Waypoint
- Proposed Access Route on Existing Road/Trail (6,223 ft)
- Proposed Access Route off Existing Road/Trail (97 ft)

BLM Route of Travel (ROT) Designation

- Motorized
- Non-Motorized

N

0 250 500 1,000
Feet

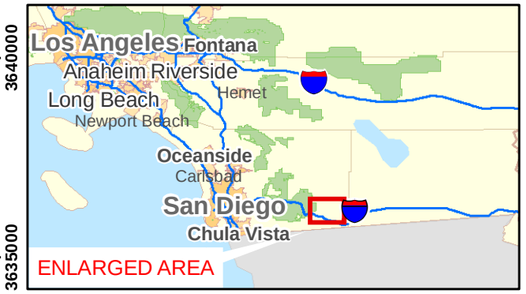
Notes:
(a) UTM Zone 11, NAD 1983 Projection.
(b) Source data: ESRI, BLM, TTEC
(c) USGS 7.5 Minute Quadrangle: Live Oak Springs

FIGURE 4
PROPOSED ACCESS TO LOCATION 3

TETRA TECH EC, INC.

Printing Date: 11/11/2009 2:42 PM
File: P:\GIS\Projects\Iberdrola\Maps\Tule\Tule-MetTower3-Route.mxd

TULE WIND METEOROLOGICAL TOWER INSTALLATION PROJECT SAN DIEGO COUNTY, CALIFORNIA



Legend

- Project Site (18.8 sq.mi./12,054 ac.)
- Proposed MET Station Location
- Existing MET Station Location
- Town
- Roads
- Interstate
- Highway
- McCain Valley Access Road
- CA Dept of Fish and Game
- CA Dept of Parks and Recreation
- Department of Defense
- US Forest Service
- BLM Wilderness Area
- BLM Special Recreation Management Area (SRMA)
- BLM Wilderness Study Area (WSA)
- USFWS Critical Habitat Units (CHU)
- BLM Areas of Critical Evironmental Concern (ACEC)
- Waterbody

N

0 1 2 3 4

Miles

Notes:

(a) UTM Zone 11, NAD 1983 Projection.

(b) Source data: ESRI, BLM, USFWS, CASIL, TTEC

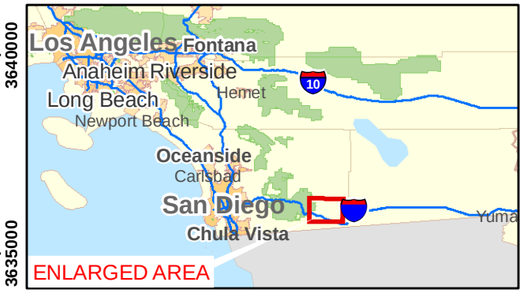
FIGURE 5
SPECIAL MANAGEMENT AREAS WITHIN THE PROJECT VICINITY

TETRA TECH EC, INC

Printing Date: 11/11/2009 2:32 PM
File: P:\GIS\Projects\Iberdrola\Maps\Tule\Tule-SMA.mxd

TULE WIND METEOROLOGICAL TOWER INSTALLATION PROJECT SAN DIEGO COUNTY, CALIFORNIA

IBERDROLA RENEWABLES



Legend

- Project Site (18.8 sq.mi./12,054 ac.)
- Waterbody
- Proposed MET Station Location
- Existing MET Station Location
- Town
- McCain Valley Access Road
- Interstate
- Highway
- Roads

BLM Visual Resource Management Areas (VRM)

VRM Class

- 1 (Preserve Existing Viewshed Condition)
- 2 (Minimally Observable Viewshed Management Permitted)
- 3 (Moderate Management-Emphasis on Minimal Viewshed Impact)
- 4 (Conduct Management Activities-Avoid Impact if Possible)

N

0 1 2 3 4

Miles

Notes:
(a) UTM Zone 11, NAD 1983 Projection.
(b) Source data: ESRI, BLM, TTEC

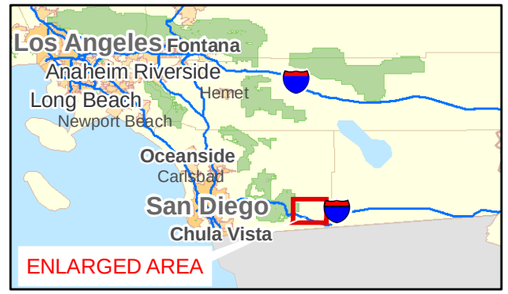
FIGURE 6
BLM VISUAL RESOURCE MANAGEMENT AREAS

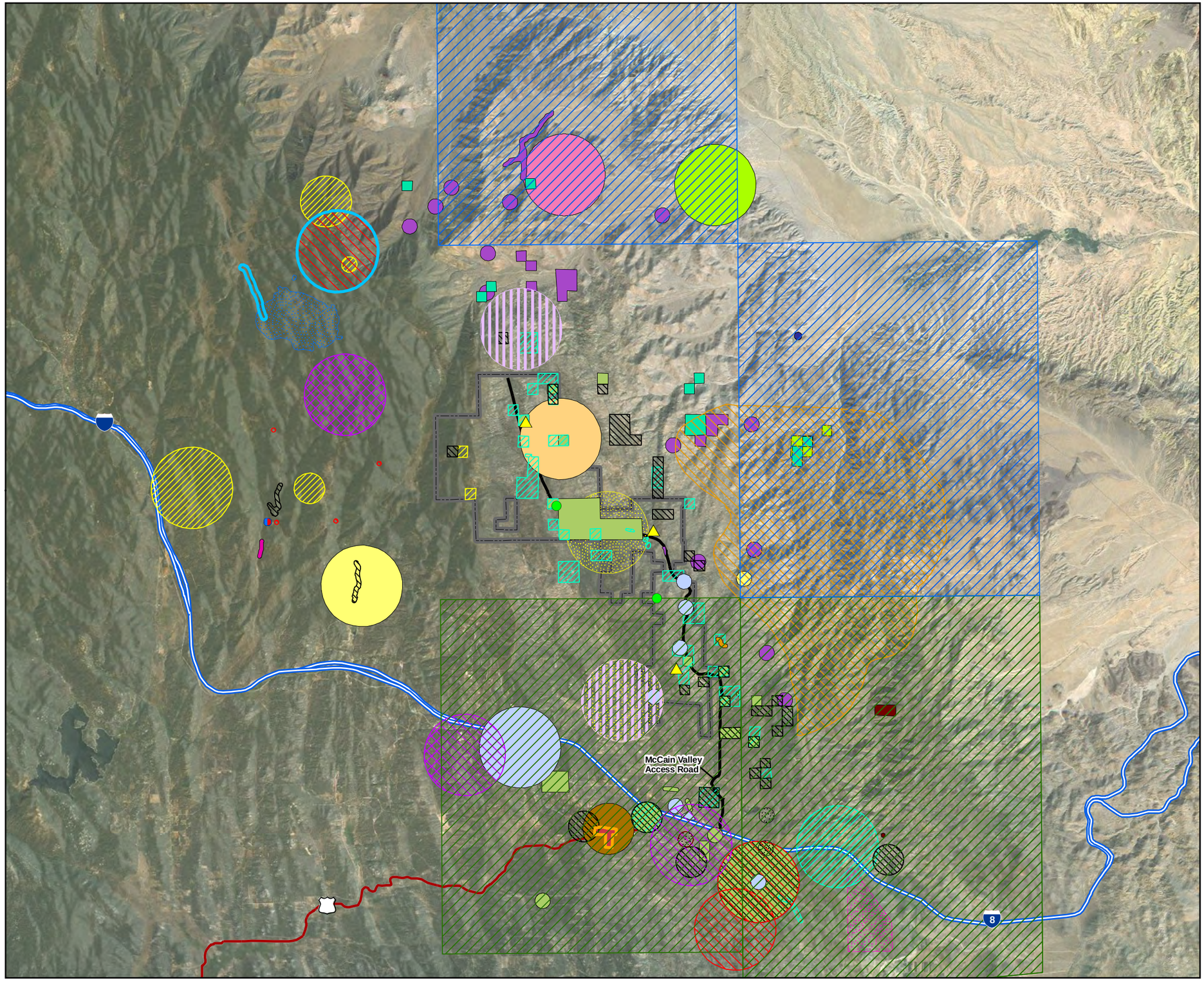
TETRA TECH EC, INC

Printing Date: 11/11/2009 2:52 PM
File: P:\GIS\Projects\Iberdrola\Maps\Tule\Tule-VRMmap.mxd

IBERDROLA RENEWABLES

TULE WIND METEOROLOGICAL TOWER INSTALLATION PROJECT SAN DIEGO COUNTY, CALIFORNIA





Legend

- Project Site (18.8 sq.mi./12,054 ac.)
- Proposed MET Station Location
- Existing MET Station Location
- McCain Valley Access Road
- Interstate
- Highway

CNDDB Species within 5 Miles of Project

Species Name

- Arroyo Toad
- Barefoot Banded Gecko
- Coast (San Diego) Horned Lizard
- Coastal Western Whiptail
- California Ayenia
- Desert Beauty
- Dulzura Pocket Mouse
- Fremont Barberry
- Hairy Stickleaf
- Jacumba Milk-Vetch
- Long-Eared Myotis
- Mount Laguna Aster
- Mountain Springs Bush Lupine
- Parish's Meadowfoam
- Payson's Jewel-Flower
- Peninsular Bighorn Sheep
- Peninsular Manzanita
- Pocketed Free-Tailed Bat
- Prairie Falcon
- Quino Checkerspot Butterfly
- Rosy Boa
- San Diego Black-Tailed Jackrabbit
- San Diego Desert Woodrat
- San Diego Sunflower
- Slender-Leaved Ipomopsis
- Southern Grasshopper Mouse
- Southern Jewel-Flower
- Spearleaf
- Sticky Geraea
- Tecate Tarplant
- Western Mastiff Bat
- Western Small-Footed Myotis
- Yuma Myotis

N

0 1 2 3 4

Miles

Notes:

(a) UTM Zone 11, NAD 1983 Projection.

(b) Source data: ESRI, BLM, CNDDB, TTEC

FIGURE 7
CNDDB SPECIAL-STATUS SPECIES RECORDS

TETRA TECH EC, INC

Printing Date: 11/11/2009 1:48 PM
File: P:\GIS\Projects\Iberdrola\Maps\Tule\Tule-CNDDB.mxd

APPENDIX A

CDFG-CNDDB SPECIES RECORDS FOR THE SOMBRERO PEAK, SWEENEY PASS, LIVE OAK SPRINGS, AND JACUMBA QUADRANGLES

California Department of Fish and Game
Natural Diversity Database
Selected Elements by Scientific Name - Portrait

	Scientific Name/Common Name	Element Code	Federal Status	State Status	GRank	SRank	CDFG or CNPS
1	Arctostaphylos peninsularis ssp. peninsularis Peninsular manzanita	PDERI04151			G2?T2?	S2?	2.3
2	Astragalus douglasii var. perstrictus Jacumba milk-vetch	PDFAB0F303			G5T2	S2.2	1B.2
3	Ayenia compacta California ayenia	PDSTE01020			G4	S3.3	2.3
4	Chaetodipus californicus femoralis Dulzura pocket mouse	AMAFD05021			G5T3	S2?	SC
5	Deinandra floribunda Tecate tarplant	PDAST4R0B0			G3	S2.2	1B.2
6	Desert Fan Palm Oasis Woodland	CTT62300CA			G3	S3.2	
7	Geraea viscida sticky geraea	PDAST42020			G3	S2.3?	2.3
8	Hulsea californica San Diego sunflower	PDAST4Z030			G2	S2.1	1B.3
9	Linanthus bellus desert beauty	PDPLM09070			G2G3	S2.3?	2.3
10	Lupinus excubitus var. medius Mountain Springs bush lupine	PDFAB2B1J5			G4T2T3	S2.3	1B.3
11	Onychomys torridus ramona southern grasshopper mouse	AMAFF06022			G5T3?	S3?	SC
12	Ovis canadensis nelsoni DPS peninsular bighorn sheep	AMALE04012	Endangered	Threatened	G4T3Q	S1	

California Department of Fish and Game
Natural Diversity Database
Selected Elements by Scientific Name - Portrait

	Scientific Name/Common Name	Element Code	Federal Status	State Status	GRank	SRank	CDFG or CNPS
1	Antrozous pallidus pallid bat	AMACC10010			G5	S3	SC
2	Ayenia compacta California ayenia	PDSTE01020			G4	S3.3	2.3
3	Bursera microphylla elephant tree	PDBUR01020			G4	S2.3	2.3
4	Caulanthus simulans Payson's jewel-flower	PDBRA0M0H0			G3	S3.2	4.2
5	Coleonyx switaki barefoot banded gecko	ARACD01040		Threatened	G4	S1	
6	Corynorhinus townsendii Townsend's big-eared bat	AMACC08010			G4	S2S3	SC
7	Crotalus ruber ruber northern red-diamond rattlesnake	ARADE02091			G4T3T4	S2?	SC
8	Desert Fan Palm Oasis Woodland	CTT62300CA			G3	S3.2	
9	Eucnide rupestris annual rock-nettle	PDLOA02020			G3	S2.2?	2.2
10	Eumops perotis californicus western mastiff bat	AMACD02011			G5T4	S3?	SC
11	Lasiurus cinereus hoary bat	AMACC05030			G5	S4?	
12	Lasiurus xanthinus western yellow bat	AMACC05070			G5	S3	
13	Lupinus excubitus var. medius Mountain Springs bush lupine	PDFAB2B1J5			G4T2T3	S2.3	1B.3
14	Lycium parishii Parish's desert-thorn	PDSOL0G0D0			G3?	S2S3	2.3
15	Macrotus californicus California leaf-nosed bat	AMACB01010			G4	S2S3	SC
16	Malperia tenuis brown turbans	PDAST67010			G4?	S1.3	2.3
17	Mentzelia hirsutissima hairy stickleaf	PDLOA030K0			G3?	S2S3	2.3
18	Mesquite Bosque	CTT61820CA			G3	S2.1	
19	Myotis volans long-legged myotis	AMACC01110			G5	S4?	
20	Ovis canadensis nelsoni DPS peninsular bighorn sheep	AMALE04012	Endangered	Threatened	G4T3Q	S1	
21	Selaginella eremophila desert spike-moss	PPSEL010G0			G4	S2.2?	2.2
22	Xylorhiza orcuttii Orcutt's woody-aster	PDASTA1040			G2G3	S2.2	1B.2

California Department of Fish and Game
Natural Diversity Database
Selected Elements by Scientific Name - Portrait

	Scientific Name/Common Name	Element Code	Federal Status	State Status	GRank	SRank	CDFG or CNPS
1	Aspidoscelis tigris stejnegeri coastal western whiptail	ARACJ02143			G5T3T4	S2S3	
2	Astragalus douglasii var. perstrictus Jacumba milk-vetch	PDFAB0F303			G5T2	S2.2	1B.2
3	Berberis fremontii Fremont barberry	PDBER06060			G5	S2?	3
4	Chaetodipus californicus femoralis Dulzura pocket mouse	AMAFD05021			G5T3	S2?	SC
5	Charina trivirgata rosy boa	ARADA01020			G4G5	S3S4	
6	Deinandra floribunda Tecate tarplant	PDAST4R0B0			G3	S2.2	1B.2
7	Falco mexicanus prairie falcon	ABNKD06090			G5	S3	
8	Geraea viscida sticky geraea	PDAST42020			G3	S2.3?	2.3
9	Lepus californicus bennettii San Diego black-tailed jackrabbit	AMAEB03051			G5T3?	S3?	SC
10	Linanthus bellus desert beauty	PDPLM09070			G2G3	S2.3?	2.3
11	Neotoma lepida intermedia San Diego desert woodrat	AMAFF08041			G5T3?	S3?	SC
12	Onychomys torridus ramona southern grasshopper mouse	AMAFF06022			G5T3?	S3?	SC
13	Ovis canadensis nelsoni DPS peninsular bighorn sheep	AMALE04012	Endangered	Threatened	G4T3Q	S1	
14	Phrynosoma coronatum (blainvillii coast (San Diego) horned lizard	ARACF12021			G4G5	S3S4	SC
15	Streptanthus campestris southern jewel-flower	PDBRA2G0B0			G2	S2.3	1B.3

California Department of Fish and Game
Natural Diversity Database
Selected Elements by Scientific Name - Portrait

	Scientific Name/Common Name	Element Code	Federal Status	State Status	GRank	SRank	CDFG or CNPS
1	Accipiter cooperii Cooper's hawk	ABNKC12040			G5	S3	
2	Agelaius tricolor tricolored blackbird	ABPBXB0020			G2G3	S2	SC
3	Astragalus douglasii var. perstrictus Jacumba milk-vetch	PDFAB0F303			G5T2	S2.2	1B.2
4	Berberis fremontii Fremont barberry	PDBER06060			G5	S2?	3
5	Deinandra floribunda Tecate tarplant	PDAST4R0B0			G3	S2.2	1B.2
6	Desert Fan Palm Oasis Woodland	CTT62300CA			G3	S3.2	
7	Dieteria asteroides var. lagunensis Mount Laguna aster	PDAST64131		Rare	G5T2T3Q	S1.1	2.1
8	Euphydryas editha quino quino checkerspot butterfly	IILEPK405L	Endangered		G5T1	S1	
9	Falco mexicanus prairie falcon	ABNKD06090			G5	S3	
10	Geraea viscida sticky geraea	PDAST42020			G3	S2.3?	2.3
11	Hulsea mexicana Mexican hulsea	PDAST4Z050			G3G4	S1.3	2.3
12	Ipomopsis tenuifolia slender-leaved ipomopsis	PDPLM060J0			G3G4	S2.3?	2.3
13	Linanthus bellus desert beauty	PDPLM09070			G2G3	S2.3?	2.3
14	Lotus haydonii pygmy lotus	PDFAB2A0H0			G3	S2.3?	1B.3
15	Lupinus excubitus var. medius Mountain Springs bush lupine	PDFAB2B1J5			G4T2T3	S2.3	1B.3
16	Onychomys torridus ramona southern grasshopper mouse	AMAFF06022			G5T3?	S3?	SC
17	Ovis canadensis nelsoni DPS peninsular bighorn sheep	AMALE04012	Endangered	Threatened	G4T3Q	S1	
18	Phrynosoma coronatum (blainvillii coast (San Diego) horned lizard	ARACF12021			G4G5	S3S4	SC
19	Senecio aphanactis chaparral ragwort	PDAST8H060			G3?	S1.2	2.2
20	Tetracoccus dioicus Parry's tetracoccus	PDEUP1C010			G3	S2.2	1B.2

APPENDIX B

BLM LIST OF PLANT AND ANIMAL SPECIES OF SPECIAL MANAGEMENT CONCERN IN THE EASTERN SAN DIEGO COUNTY REGIONAL MANAGEMENT PLAN

TABLE 3-3
PRIORITY PLANT SPECIES

Scientific Name	Common name	Family	CNPS Status	Occurrence Known or Suspected
Agave deserti (Engelm.) Gentry	Desert agave	Liliaceae	--	Known
Arctostaphylos peninsularis var. *peninsularis*	Peninsular manzanita	Ericaceae	List 2	Suspected
Eucnide rupestris	Rock nettle	Loasaceae	List 2	Suspected
Ferocactus viridescens (Torrey & A. Gray) Britt. & Rose	Coast barrel cactus	Cactaceae	List 2	Known
Geraea viscida	Sticky geraea	Asteraceae	List 2	Known
Hesperocaulus ungulate	Desert lily	Liliaceae	--	Known
Hulsea mexicana	Mexican hulsea	Asteraceae	List 2	Known
Ipomopsis tenuifolia	Slender-leaved Ipomopsis	Polemoniaceae	List 2	Known
Linanthus bellus	Desert beauty	Polemoniaceae	List 2	Known
Lycium parishii	Parish's desert thorn	Solanaceae	List 2	Suspected
Malperia tenius	Brown turbans	Asteraceae	List 2	Suspected
Mentzelia hirsutissima	Hairy stickleaf	Loasaceae	List 2	Known
Nolina bigelovii	Beargrass	Liliaceae	--	Known
Fouquieria splendens Engelm. ssp. *splendens*	Ocotillo	Fouquieraceae	--	Known
Opuntia wolfii	Wolf's cholla	Cactaceae	List 4	Suspected
Opuntia spp.	Cholla and cactus	Cactaceae	--	Known
Quercus agrifolia	Coast live oak	Fagaceae	--	Known
Quercus chrysolepis	Canyon live oak	Fagaceae	--	Known
Quercus kelloggii	California black oak	Fagaceae	--	Known
Quercus wislizeni	Interior live oak	Fagaceae	--	Known
Senecio aphanactis	Rayless ragwort	Asteraceae	List 2	Suspected
Yucca schidigera K.E. Ortgies	Mohave yucca	Liliaceae	--	Known

CNPS = California Native Plant Society
List 2 = Species rare, threatened, or endangered in California but which are more common elsewhere. These species are eligible for state listing.
List 3 = Species for which more information is needed. Distribution, endangerment, and/or taxonomic information are needed.
List 4 = A watch list of species of limited distribution. These species need to be monitored for changes in the status of their populations.

3.7 Special Status Species

There are a number of special status plant and wildlife species that are known from the Planning Area. Table 3-4 lists all species that are listed by the federal or state government as threatened or endangered or are listed as sensitive by BLM. Table 3-4 also provides an assessment regarding occurrence on BLM-administered lands in the Planning Area.

TABLE 3-4
SPECIAL STATUS SPECIES

Scientific Name	Common Name	Federal Status	State Status	BLM Status	Occurrence Known or Suspected
Plant Species					
Astragalus douglasii var. *perstrictus*	Jacumba milkvetch			Sensitive	Known
Clarkia delicata	Delicate clarkia			Sensitive	Suspected
Deinandra floribunda	Tecate tarplant			Sensitive	Suspected
Fremontodendron mexicanum	Mexican flannelbush	FE	SR		Not expected
Heuchera brevistaminea	Laguna Mountains alumroot			Sensitive	Suspected
Hulsea californica	San Diego sunflower			Sensitive	Known
Lupinus excubitus var. medius	Mountain Springs bush lupine			Sensitive	Known
Machaerantha asteroides var. lagubnensisq	Laguna Mountains aster		SR		Suspected
Berberis nevinii	Nevin's barberry	FE	SE		Not expected
Poa atropurpurea	San Bernardino blue grass	FE			Not expected
Streptanthus campestris	Southern jewelflower			Sensitive	Known
Tetracoccus dioicus	Parry's tetracoccus			Sensitive	Suspected
Wildlife Species					
Euphydryas editha quino	Quino checkerspot butterfly	FE			Suspected
Pyrgus ruralis lagunae	Laguna Mountains skipper	FE			Not expected
Gasterosteus aculeatus williamsoni	Unarmored three-spined stickleback	FE	SE		Not expected
Bufo californicus	Arroyo toad	FE			Not expected
Coleonyx switaki	Barefoot gecko		ST	Sensitive	Known
Buteo swainsoni	Swainson's hawk		ST		Known
Aquila chrysaetos canadensis	Golden eagle	BEPA	CFP	Sensitive	Known
Empidonax traillii extimus	Southwestern willow flycatcher	FE	SE		Suspected
Vireo vicinior	Gray vireo			Sensitive	Known
Vireo bellii pusillus	Least Bell's vireo	FE	SE		Known
Myotis ciliolabrum	Small footed myotis			Sensitive	Known
Myotis evotis	Long-eared myotis			Sensitive	Suspected

TABLE 3-4
SPECIAL STATUS SPECIES

Scientific Name	Common Name	Federal Status	State Status	BLM Status	Occurrence Known or Suspected
Wildlife Species (cont.)					
Plecotus townsendii	Townsend's western big-eared bat			Sensitive	Known
Ovis canadensis nelsoni	Peninsular bighorn sheep	FE	ST		Known

FE = federally listed endangered
SE =state-listed endangered
ST = state-listed threatened
SR = state-listed rare
CFP = California fully protected
BEPA = Bald Eagle Protection Act

3.7.1 Federally Listed Species

USFWS has identified ten federally listed species as occurring within the Planning Area: Peninsular bighorn sheep, least Bell's vireo, southwestern willow flycatcher, arroyo toad, quino checkerspot butterfly, Laguna Mountains skipper, unarmored threespine stickleback, Mexican flannelbush, Nevin's barberry, and San Bernardino blue grass. Species accounts are presented below for the ten listed species identified in this section as possibly occurring in the Planning Area. Pertinent aspects of the status, distribution, life history, and habitat requirements of these species have been extracted from a variety of sources, including the proposed and final rules to list these species; the proposed and final rules to designate critical habitat, recovery plans, scientific journal articles, and other relevant documents. Records of occurrence for the Planning Area are based on BLM file documents and field notes; published literature sources, technical reports, and the California Natural Diversity Database (State of California 2006a).

3.7.1.1 Peninsular Bighorn Sheep

Species

The Peninsular Ranges population of bighorn sheep (*Ovis canadensis*) was listed by the federal government as an endangered species in March 1998 in response to population declines associated with habitat loss, disease, predation, low recruitment, and adverse behavioral responses to residential and commercial development, among other factors (USFWS 1998a). The State of California listed it as threatened in 1971 (CDFG 2005). The range of the listed population extends from the San Jacinto Mountains in Riverside County to the Mexican border. Most of the population lives along east facing slopes of the Peninsular Ranges at elevations ranging from 300 to 4,000 feet on the northwestern edge of the Sonoran Desert. Their distribution, particularly during the summer, tends to

APPENDIX C

NATIVE AMERICAN CONSULTATION LETTERS

Jenna Farrell/SCI/CSQ
06/30/2008 03:08 PM

To gtomei_NAHC@pacbell.net
cc
bcc
Subject NAHC Sacred Lands File Search Tule-Iberdrola Wind Project

Dear Ms. Tomei:

Iberdrola Renewable has applied for a Temporary Use Permit (TUP) from the Bureau of Land Management (BLM) to install and operate three Meteorological Towers at their Tule Wind proposed project area, located on public lands administered by the BLM El Centro field office in California. Please review the attached map and notify us if there are any locations that are included in your Sacred Lands Inventory within the wind resource project area. The proposed project area is located (see attached map):

1:24k Topo Quads containing Tule Project:
- Sombrero Peak
- Live Oak Springs
- Mount Laguna (tiny little bit)

PLSS Township/Range containing Tule Project
- T15S/R6E
- T16S/R6E
- T16S/R7E
- T17S/R73

Please reference the "Tule-Iberdrola" in your correspondence, and send the information to my attention at Tetra Tech EC, INC. 10860 Gold Center Drive, Suite 200, Rancho Cordova, CA 95670, or fax it to (916)-852-0307, or electronically. Please contact me at (916) 853-4575 or jenna.farrell@tteci.com if you have any questions.

Thank you,

Jenna Farrell

PacWindDev_NewMets_CACA45248.pdf

Jenna Farrell | **Cultural Resource Specialist**
Direct: 916.853.4575 | Main: 916.853.4500 | Fax: 916.852.0307
Jenna.Farrell@tteci.com

Tetra Tech EC | **Social Sciences**
10860 Gold Center Road | Rancho Cordova, CA 95670-6024 | www.tteci.com

STATE OF CALIFORNIA Arnold Schwarzenegger, Governor

NATIVE AMERICAN HERITAGE COMMISSION
915 CAPITOL MALL, ROOM 364
SACRAMENTO, CA 95814
(916) 653-6251
Fax (916) 657-5390
Web Site www.nahc.ca.gov
ds_nahc@pacbell.net

July 3, 2008

Ms. Jenna Farrell
Tetra Tech EC, INC.
10860 Gold Center Drive, Suite 200
Rancho Cordova, CA 95670

Sent by FAX to: 916-852-0307
Number of Pages: 3

Re: Request for a Sacred Lands File records search for the proposed **Tule Wind Project; Temporary Use Permit from the U.S. Bureau of Land Management;** located in the McCain Valley/Jacumba/Sombero Peak/Mt. Laguna areas; eastern San Diego County / Imperial County Line, California

Dear Ms. Farrell:

The Native American Heritage Commission was able to perform a record search of its Sacred Lands File (SLF) for the affected project area (APE). The SLF search did indicate the presence of numerous Native American cultural resources in the immediate project areas.

Early consultation with Native American tribes in your area is the best way to avoid unanticipated discoveries once a project is underway. Enclosed are the names of the nearest tribes that may have knowledge of cultural resources in the project area. In particular, we recommend that you contact Paul Cuero at (619) 478-9046, Carmen Lucas at (619) 709-4207 and Leroy Elliott at (619) 766-4930 and the other persons on the attached list of Native American contacts may have knowledge as to whether or not the known cultural resources identified may be at-risk by the proposed project. The Commission makes no recommendation of a single individual or group over another. It is advisable to contact the person listed; if they cannot supply you with specific information about the impact on cultural resources, they may be able to refer you to another tribe or person knowledgeable of the cultural resources in or near the affected project area (APE).

Lack of surface evidence of archeological resources does not preclude the existence of archeological resources. In fact, a Native American tribe may be the only source of information about a cultural resource. Lead agencies should consider avoidance, as defined in Section 15370 of the California Environmental Quality Act (CEQA) when significant cultural resources could be affected by a project. Also, Public Resources Code Section 5097.98 and Health & Safety Code Section 7050.5 provide for provisions for accidentally discovered archeological resources during construction and mandate the processes to be followed in the event of an accidental discovery of any human remains in a project location other than a 'dedicated cemetery. Discussion of these should be included in your environmental documents, as appropriate.

If you have any questions about this response to your request, please do not hesitate to contact me at (916) 653-6251.

Sincerely,

Dave Singleton
Program Analyst

Native American Contacts
San Diego and Imperial Counties
July 3, 2008

Barona Group of the Capitan Grande
Rhonda Welch-Scalco, Chairperson
1095 Barona Road Diegueno
Lakeside , CA 92040
sue@barona-nsn.gov
(619) 443-6612
619-443-0681

Kwaaymii Laguna Band of Mission Indians
Carmen Lucas
P.O. Box 775 Diegueno -
Pine Valley , CA 91962
(619) 709-4207

La Posta Band of Mission Indians
Gwendolyn Parada, Chairperson
PO Box 1120 Diegueno
Boulevard , CA 91905
(619) 478-2113
619-478-2125

Kumeyaay Cultural Repatriation Committee
Steve Banegas, Spokesperson
1095 Barona Road Diegueno/Kumeyaay
Lakeside , CA 92040
(619) 742-5587
(619) 443-0681 FAX

Manzanita Band of Kumeyaay Nation
Leroy J. Elliott, Chairperson
PO Box 1302 Kumeyaay
Boulevard , CA 91905
(619) 766-4930
(619) 766-4957 Fax

Ewiiaapaayp Tribal Office
Michael Garcia, Vice-Chairman/EPA Director
PO Box 2250 Kumeyaay
Alpine , CA 91903-2250
michaelg@leaningrock.net
(619) 445-6315 - voice
(619) 445-9126 - fax

Kumeyaay Cultural Heritage Preservation
Paul Cuero
36190 Church Road, Suite 5 Diegueno/ Kumeyaay
Campo , CA 91906
chairman@campo-nsn.gov
(619) 478-9046
(619) 478-9505
(619) 478-5818 Fax

Clint Linton
P.O. Box 507 Diegueno/Kumeyaay
Santa Ysabel , CA 92070
(760) 803-5694
cjlinton73@aol.com

This list is current only as of the date of this document.

Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources for the propose Tule Wind Projects; U.S. Bureau of Land Management (BLM) Temporary Use Permit for the projects located in the In Ko Pah, Jucumba Mountains, McCaine Valley and Mt. Laguna area of San Diego and Imperial counties; California for which a Sacred Lands File search and Native American Contacts list were requested.

Native American Contacts
San Diego and Imperial Counties
July 3, 2008

Manzanita Band of the Kumeyaay Nation
Nick Elliott, Cultural Resources Coordinator
P.O. Box 1302 Kumeyaay
Boulevard , CA 91905
(619) 766-4930
(619) 925-0952 - cell
(919) 766-4957

This list is current only as of the date of this document.

Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources for the propose Tule Wind Projects; U.S. Bureau of Land Management (BLM) Temporary Use Permit for the projects located in the In Ko Pah, Jucumba Mountains, McCaine Valley and Mt. Laguna area of San Diego and Imperial counties; California for which a Sacred Lands File search and Native American Contacts list were requested.

United States Department of the Interior

BUREAU OF LAND MANAGEMENT
El Centro Field Office
1661 South 4th Street
El Centro, California 92243-4561

December 19, 2008

In Reply Refer To: EIS CA-670-2008-040/ CACA-45248/ 8100 (P)
CERTIFIED MAIL – RETURN RECEIPT REQUESTED

Mr. Robert Pinto, Sr., Chairman
Ewiiaapaayp Band of Kumeyaay Indians
P.O. Box 2250
Alpine, CA 91903-2250

Dear Chairman Pinto,

Iberdrola Renewables Holdings, Inc has applied for authorization to develop a wind energy generating facility for its Tule Wind Project on Bureau of Land Management (BLM), El Centro Field Office federal land in eastern San Diego County. The applicant currently holds a right of way for testing and monitoring wind energy in the area, and two meteorological towers have been operating within the right of way area since 2004. The proposed project area is located 70 miles east of San Diego and north of Interstate 8 (see attached map). The entire right of way for monitoring and testing involves approximately 16,354 acres of federal land. Ground disturbing activities associated with this project would involve construction of access and/or utility roads, installation of meteorological testing towers and wind turbines, and a transmission line to a substation and maintenance facility. A final Plan of Development (POD) for the energy generating facility is in the process of being completed and will provide more detailed information on that project, and will outline the actual acreage of ground disturbance.

Under federal law, BLM is responsible for processing requests to authorize the projects, associated transmission lines, and other facilities to be constructed and operated on land it manages. In processing the applications, BLM must comply with the requirements of the National Environmental Policy Act (NEPA), which requires that federal agencies reviewing projects under their jurisdiction consider the environmental impacts associated with their construction and operation. In the case of wind power projects such as the Tule Wind Project, this will be accomplished through preparation of Draft and Final Environmental Impact Statements (EIS). BLM will act as the lead federal agency responsible for meeting the consultation and documentation requirements for Section 106 of the National Historic Preservation Act, Section 7 of the Endangered Species Act, and Native American consultation, including Government to Government consultation.

The applicant, Iberdrola Renewables, Inc, has also applied for authorization from BLM to conduct additional meteorological testing within the project area to provide preliminary information to assist with permitting, site development, planning and preliminary engineering design of the Tule Wind Project. BLM is preparing an Environmental Assessment (EA) to analyze the environmental impacts that may be associated with the issuance of the Permit to conduct the meteorological testing. As stated above, Iberdrola has submitted a separate application to the BLM for the use of the land for future wind energy development, which will be the subject of a separate EIS; any authorization of meteorological site testing and monitoring does not automatically authorize the larger energy development project.

This letter serves to provide notification of both the proposed projects, explain the roles of the BLM, and offer an invitation to the tribe to enter into government-to-government consultation pursuant to the *Executive Memorandum of April 29, 1994* and other relevant laws and regulations We request your assistance in identifying any issues or concerns the Tribe might have about the project, including identifying sacred sites and places of traditional religious and cultural significance which might be affected by the proposed projects Currently, Tetra Tech Environmental Consultants, Inc. is undertaking the cultural resources record search and will be conducting a cultural resources inventory of the area of potential effect for the proposed meteorological towers They may be contacting you to gather additional information. If you provide sensitive information, a 1991 amendment to the national Historic Preservation Act allows the Bureau of Land Management to prevent the release of this information to the public if it may pose a risk to historic properties or traditional cultural properties.

Please do not hesitate to contact us if you have any comments, questions or would like to schedule a meeting. The BLM points of contact for this project are Thomas Zale, Associate Field Manager: (760) 337-4420, email: thomas_zale@ca.blm.gov; or Jenny Haggar, Archaeologist: (760) 337-4473, email: Jenny_Haggar@ca.blm.gov If you are aware of any other Tribes, individuals, or tribally-affiliated organizations that should be contacted regarding this project, please let us know A list of Tribal governments and other tribal contacts receiving a copy of this letter is enclosed for your reference. We would also appreciate some notice if the Tribe believes that the project lies outside its area of interest and does not wish to consult or be contacted about this in the future. You may contact us by letter, phone or email to let us know of your interest or preference for involvement in this project. The BLM truly appreciates your interest and concern for the public lands in San Diego County. We look forward to hearing from you.

Sincerely,

Vicki L. Wood
Field Manager

Attachments: Project area map
List of Tribal Governments and other tribal contacts

TRIBAL GOVERMENTS AND CONTACTS LIST
IBERDROLA RENEWABLES TULE WIND PROJECT

Ms. Monique LaChappa, Chairperson
Campo Kumeyaay Nation
36190 Church Road, Suite 1
Campo, CA 91906

Cc: Ms. Lisa Gover, EPA Director

Mr. Johnny Hernandez, Chairman
Santa Ysabel Band of Diegueno Indians
P.O. Box 130
Santa Ysabel, CA 92070

Cc: Mr. Clint Linton

Mr. Robert Pinto, Sr., Chairman
Ewiiaapaayp Band of Kumeyaay Indians
P.O. Box 2250
Alpine, CA 91903-2250

Cc: Mr. Michael Garcia, Vice Chairman
Mr. Willie Micklin, Executive Director

Ms. Rebecca Osuna, Chairperson
Inaja-Cosmit Band of Mission Indians
309 S. Maple Street
Escondido, CA 92025

Ms. Carmen Lucas
Kwaaymii Laguna Band of Mission Indians
PO Box 775
Pine Valley, CA 91962

Ms. Gwendolyn Parada, Chairperson
La Posta Band of Kumeyaay Indians
P.O. Box 1120
Boulevard, CA 91905

TRIBAL GOVERMENTS AND CONTACTS LIST
IBERDROLA RENEWABLES TULE WIND PROJECT

Mr. Leroy J. Elliott, Chairman
Manzanita Band of Kumeyaay Indians
PO Box 1302
Boulevard, CA 91905

Cc: Mr. Nick Elliot, EPA Director

Mr. Bobby Barrett, Chairman
Viejas Band of Kumeyaay Indians
P.O. Box 908
Alpine, CA 91903-0908

Cc: Ms. Lisa Haws, Land Use Manager
